IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Jeff EDER

Serial No.: 09/764,068

Filed: January 19, 2001

For: A method of and system for defining and measuring the real options of a commercial enterprise

Group Art Unit: 3692

Examiner: J. Liversedge

Brief on Appeal

Sir or Madam:

The Appellant respectfully appeals the rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 62, claim 63, claim 64, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73, claim 74 and claim 75 in the March 31, 2009 Office Action for the above referenced application. The Table of Contents is on page 2 of this paper.

Table of Contents

1. Real party in interest

Asset Reliance, Inc. (dba Asset Trust, Inc.) is the Appellant and the owner of 100% interest in the above referenced patent application.

2. Related appeals

An Appeal for U.S. Patent Application 09/940,450 filed on August 29, 2001 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/166,758 filed on June 12, 2002 may be affected by or have a bearing on this appeal. An Appeal for U.S. Patent Application 10/743,616 filed on December 22, 2003 may be affected by or have a bearing on this appeal.

3. Status of Claims

Claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 46, claim 47, claim 48, claim 49, claim 50, claim 51, claim 52, claim 62, claim 63, claim 64, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73, claim 74 and claim 75 are rejected and are the subject of this appeal. Claims 37, 55, 67, 68, 72 and 75 are amended. Claims 1 – 35 and 66 are cancelled.

4. Status of Amendments

An amendment/reply that contained the amendments to claims 37, 55, 67, 68, 72 and 75 was filed on June 30, 2009.

5. Summary of Claimed Subject Matter

One embodiment of a detailed method of and system for defining and measuring the real options of a commercial enterprise according to the present invention is best depicted in Figures 1 – 7 of the specification for the instant application. Figure 1 gives an overview of the major processing steps which include transforming data from a plurality of disparate database management systems into an integrated database, analyzing the data as required to develop a model of enterprise market value by element of value and category of value and then using the model to analyze changes and produce reports.

Independent claim 36 - One embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 36 where a computer implemented process prepares enterprise related data from a plurality of management systems for use in processing and analyzes the data using a series of multivariate analyses in order to develop a model of enterprise market value by element and category of value. Support for the

specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

a) preparing data representative of an enterprise for use in processing - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

b) transforming at least a portion of the data into a model of an enterprise market value by an element and category of value by completing a series of multivariate analyses that utilize said data - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

c) where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof – the categories of value are described in several places including Table 1 on page 9 of the specification.

d) where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value – the identification of a tangible contribution for each element of value is described in several places including line 18, page 11 through line 2, page 12 of the specification, and

e) where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof – the elements of value are described in several places including Table 1 on page 9 of the specification.

Claim 37 - The limitations and activities associated with dependent claim 37 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification. The output of the model is then analyzed and reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Claim 38 - The limitations associated with dependent claim 38 are described in several places including line 7, page 54 through line 5, page 56 and lines 21 through 33 of page 58 of the specification and FIG. 5B, block 615 and column 68, line 1 through line 5 of cross referenced U.S. Patent 5,615,109.

Claim 39 - The limitations associated with dependent claim 39 are described in several places including FIG. 6A reference number 302 - 312, FIG. 6B reference numbers 321, 323 and 325 - 332, FIG. 6C reference numbers 341 - 343, 345, 347 and 351 - 353 and line 20, page 47 through line 30, page 75 of the specification. The value of each element of value is then reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Claim 40 - The limitations associated with dependent claim 40 are described in several places including FIG. 6A reference number 306 and line 1 through line 4 on page 52 of the specification.

Claim 41 - The limitations associated with dependent claim 41 are described in several places including FIG. 1 reference number 5, 10, 12, 15, 25, 30, 35 and 37, line 10 through line 15 on page 14 and line 5 through line 15, page 27 of the specification.

Claim 42 - The limitations associated with dependent claim 42 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 43 - The limitations associated with dependent claim 43 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312,

FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 44 - The limitations associated with dependent claim 44 are described in several places including Table 15 on page 29 of the specification.

Claim 45 - The limitations associated with dependent claim 45 are described in several places including line 7, page 54, line 5, page 56 and lines 21 through 33 of page 58 of the specification and FIG. 5B, block 615 and column 68, line 1 through line 5 of cross referenced U.S. Patent 5,615,109.

Independent claim 46 - A second embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 46 where an article of manufacture instructs a computer system to prepare enterprise related data from a plurality of management systems for use in processing and analyze the data using a series of multivariate analyses in order to develop a model of enterprise market value by element and category of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

a) preparing data representative of an enterprise for use in processing - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

b) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number

300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, Table 1 on page 9, line 18, page 11 through line 2, page 12 and line 20, page 47 through line 30, page 75 of the specification.

c) *reporting the value contribution of the elements of value using an electronic display or a paper document* - the value of each element of value is reported in accordance with the procedure detailed in FIG. 1 reference number 400, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification.

Claim 47 - The limitations associated with dependent claim 47 are described in several places including Table 1, page 9 and line 5 through line 15, page 27 of the specification.

Claim 48 - The limitations associated with dependent claim 48 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

Claim 49 - The limitations associated with dependent claim 49 are described in several places including FIG 6B reference number 331 and line 25, page 63 through line 20, page 65 of the specification.

Claim 50 - The limitations associated with dependent claim 50 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 51 - The limitations associated with dependent claim 51 are described in several places including Table 32 on page 64 of the specification.

Claim 52 - The limitations and activities associated with dependent claim 52 are described in several places including FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 10, page 56 through line 30, page 75 of the specification.

Claim 53 - The limitations associated with dependent claim 53 are described in several places including line 8, page 30 through line 15, page 30 of the specification.

Claim 54 - The limitations associated with dependent claim 54 are described in several places

including FIG 6A reference number 309 and line 15, page 54 through line 20, page 55 of the specification.

Independent claim 55 - A third embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 55 where a computer implemented process prepares enterprise related data from a plurality of management systems for use in processing and transforms the data into causal models of the categories of value. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

a) preparing data representative of an enterprise for use in processing - data representative of the enterprise are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

b) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value and each of the categories of organization value- the integrated data are then analyzed using a series of multivariate analyses in order to create causal category of value models that identify a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

c) where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof – the categories of value are described in several places including Table 1 on page 9 of the specification.

d) where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and

combinations thereof – the elements of value are described in several places including Table 1 on page 9 of the specification.

Claim 56 - The limitations associated with dependent claim 56 are described in several places including Table 15 on page 29 of the specification.

Claim 57 - The limitations associated with dependent claim 57 are described in several places including FIG. 1, reference number 200 and 300, FIG. 5A reference numbers 201 - 204, 207 – 209 and 211 FIG. 5B reference numbers 221 – 222, 225 – 226, 209 and 211, FIG. 5C reference numbers 241 – 242, 245 – 246, 209 and 211, FIG. 5D reference numbers 261 – 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268 – 269, 272, 278 - 279 and 281 - 282, FIG. 5F reference numbers 291 - 298, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20 and line 1, page 14 through line 30, page 75 of the specification.

Claim 58 - The limitations associated with dependent claim 58 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

Claim 59 - The limitations associated with dependent claim 59 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 60 - The limitations associated with dependent claim 60 are described in several places including FIG 6C reference number 347 and line 22, page 70 through line 20, page 71 of the specification.

Claim 61 - The limitations associated with dependent claim 61 are described in several places including table 1, page 9 of the specification.

Claim 62 - The limitations associated with dependent claim 62 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 63 - The limitations associated with dependent claim 63 are described in several places FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 20, page 47 through line 30, page 77 of the specification and cross-referenced patent 5,615,109.

Independent claim 64 - A fourth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 64 where a computer implemented process uses independent components of application software to transform data that has been integrated from a plurality of management systems in accordance with a common model or xml schema into a predictive model. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

a) using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance - data are processed in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

b) where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard. - data from the database management systems associated with a plurality of systems are converted, integrated and stored in accordance with a common model or schema defined by xml metadata as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

Claim 65 - The limitations associated with dependent claim 65 are described in several places including FIG. 6A reference numbers 308 - 311 and line 30, page 53 through line 20, page 56 of the specification.

Claim 67 - The limitations associated with dependent claim 67 are described in several places including FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 1, page 14 through line 30, page 75 of the specification.

Claim 68 - The limitations associated with dependent claim 68 are described in several places including FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353 and line 20, page 47 through line 30, page 75 of the specification.

Claim 69 - The limitations associated with dependent claim 69 are described in several places including FIG. 1 reference number 5, 10, 12, 15, 25, 30, 35 and 37, line 10 through line 15 on page 14 and line 5 through line 15, page 27 of the specification.

Independent claim 70 - A fifth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 70 where a computer implemented process converts, integrates and stores data from a plurality of management systems into an integrated database. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

The computer system is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

a) integrating, converting and storing data representative of an organization from a plurality of disparate sources in accordance with a common xml schema in order to transform said data into an integrated database, and outputting said database - the process of converting, integrating and storing data from a plurality of disparate sources and outputting an integrated database (50) is described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204,

207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification;

b) where a set of integration and conversion rules are established using a metadata and conversion rules window and saved in metadata mapping table - the acquisition of conversion rules using a metadata and conversion rules window (702) is described in FIG. 5A, reference number 203. These rules are stored in the metadata mapping table (141) as described on line 17, page 30 through line 33, page 30 of the specification.

Claim 71 - The limitations associated with dependent claim 71 are described in several places including FIG. 5A reference numbers 202 and 203, line 8, page 30 through line 33, page 30 of the specification.

Independent claim 72 - A sixth embodiment of the system for defining and measuring the real options of a commercial enterprise is exemplified in independent claim 72 where a machine prepares data from a plurality of management systems for use in processing and analyzes the data in order to identify a contribution of each element of value to each category of value. The identified contributions are then reported in a balance sheet format. Support for the specific steps contained in the claim can be found in the specification and drawings as detailed below:

a) a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored therein, which when executed cause the processor to complete a computer implemented market value accounting method - the computer is described in FIG. 3, reference numbers 100, 110 – 118, 120 – 128 and 130 – 138 and line 24, page 15 through line 11, page 17 of the specification.

b) preparing data representative of an organization for use in processing - data representative of the organization are prepared for use in processing by converting, integrating and storing the data in the application database (50) as described in FIG. 1, reference number 200, FIG. 5A reference numbers 201, 202, 203, 204, 207, 208, 209 and 211 FIG. 5B reference numbers 221, 222, 225, 226, 209 and 211, FIG. 5C reference numbers 241, 242, 245, 246, 209 and 211, FIG. 5D reference numbers 261, 262, 265, 267, 269, 209 and 211, FIG. 5E reference numbers 268, 269, 272, 278, 279, 281 and 282, FIG. 5F reference numbers 291, 292, 293, 294, 295, 296, 297 and 298,and line 1, page 14 through line 18, page 47 of the specification.

c) transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof, - the integrated data are then analyzed using a series of multivariate analyses in order to create a model of enterprise market value that identifies a tangible impact of each element of value on each category of value in accordance with the procedure detailed in FIG. 1, reference number 300, FIG. 6A reference numbers 302, 303, 304, 405, 306, 307, 308, 309, 310, 311 and 312, FIG. 6B reference numbers 321, 323, 325, 326, 327, 328, 329, 330, 331 and 332, FIG. 6C reference numbers 341, 342, 343, 345, 347, 351, 352 and 353, Table 1 on page 9 and line 20, page 47 through line 30, page 75 of the specification.

d) using the tangible contribution for each element of value to identify a market value for each element of value and report the value of each element of value in a balance sheet format – the calculation and display of the valuations for the elements of value is described in FIG. 7, reference number 402 and line 1 through line 13, page 76 of the specification.

e) where the reported value is a value for a specific point in time within a sequential series of points in time – the time period is set by the system date as described on line 8, page 30 through line 15 of the specification.

Claim 73 - The limitations associated with dependent claim 73 are described in several places including table 1, page 9, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407 and line 33, page 75 through line 30, page 77 of the specification.

Claim 74 - The limitations associated with dependent claim 74 are described in several places including FIG. 5A reference numbers 202 and 203, FIG. 7 reference numbers 402, 403, 404, 405, 406 and 407, line 8, page 30 through line 33, page 30 and line 33, page 75 through line 30, page 77 of the specification.

Claim 75 - The limitations associated with dependent claim 75 are described in several places including Table 1 on page 9 of the specification.

6. Grounds of rejection to be reviewed on appeal

Issue 1 - Whether claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable under 35 USC §103(a) over "Premium Drivers of

Post Deal Value" in Mergers and Acquisitions (hereinafter, Bielinski) alone, in view of "The 1986-88 Stock Market: Investor Sentiment or Fundamentals?" (hereinafter, Baur), in view of Baur and U.S. Patent 6,192,354 (hereinafter, Bigus) or in view of Baur and U.S. Patent 4,989,141 (hereinafter, Lyons)?

Issue 2 - Whether claim 49, claim 50, claim 51 and claim 52 are patentable under 35 USC §103(a) over Bielinski in view of "Get Real" (hereinafter, Mauboussin) or in view of U.S. Patent 5,245,696 (hereinafter, Stork)?

Issue 3 – Whether claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable under 35 USC §103(a) over U.S. Patent 7,249,328 (hereinafter, Davis) in view of Bielinski, in view of U.S. Patent 6,549,922 (hereinafter, Srivastava) or in view of "Building Customer and Shareholder Value" (hereinafter, Cleland)?

Issue 4 - Whether claim 46, claim 48, claim 53 and claim 54 are anticipated under 35 USC §102(b) by Bielinski?

Issue 5 - Whether the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 represents statutory subject matter under USC §101?

Issue 6 – Whether the invention described in claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are enabled under 35 USC §112, first paragraph?

Issue 7 – Whether claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 are indefinite under 35 USC §112, second paragraph?

7. The Argument

For each ground of rejection which Appellant contests herein which applies to more than one claim, such additional claims, to the extent separately identified and argued below, do not stand and fall together.

Issue 1 - Whether claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable under 35 USC §103(a) over Bielinski alone, in view of Baur, in view of Baur and Bigus or in view of Baur and Lyons?

The claims are patentable for several reasons. The primary reason is that the cited combination of documents (Bielinski, Baur, Bigus and Lyons) and the arguments related to the cited combination of documents fail to establish a prima facie case of obviousness for every rejected claim as detailed below.

Reason #1 - The first reason that claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable is that the cited documents fail to establish a prima facie case of obviousness because they teach away from all the claimed methods. MPEP § 2141.02 states that: *"in determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious but whether the claimed invention as a whole would have been obvious (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983))."* Furthermore, it is well established that: *A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).* Examples of the cited documents teaching away from the claimed invention include:

1) All the references teach away from the claimed method of analyzing and modeling enterprise financial performance by category of value. Bielinski, which is the primary reference for all obviousness rejections, teaches and relies on the VBM method of discounted cash flow modeling. VBM uses Shareholder Value Analysis (hereinafter, SVA) principles, including the use of a single tree of equations to calculate cash flow and an enterprise value, but advances the technique by using historical data, operations linked value drivers and concurrent changes in multiple value drivers.

In accordance with the VBM/SVA method, most of the tree is used for calculating the actual cash flow for prior periods. The remainder of the tree is used for determining the cost of capital used to discount the cash flow. Putting the two parts of the tree together, the VBM method teaches that the only way to increase enterprise value is to increase the value of period cash flow (see Evidence Appendix, pages 73 – 75). By way of contrast, the claimed invention teaches that as many as three categories of value determine the value of an enterprise as shown in the table below.

Categories of value per 09/764,068	Categories of value per Bielinski
1. Current operation (cash flow), 2. Market sentiment, and 3. Real options.	1. Cash flow (current operation)

Baur also teaches away from analyzing and modeling an enterprise by category of value as it focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500. Share prices reflect the combined value of all categories of value in an enterprise. Lyons also teaches away from analyzing and modeling enterprise financial performance by category of value as it focuses exclusively on manipulating traditional financial statements which (as is well known in the art) do not recognize two of the three categories of value, real options and market sentiment.

By exclusively teaching methods that teach away from the claimed modeling method, the references also teach away from the claimed method of valuing an enterprise market sentiment and valuing a share of enterprise stock. Affects claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75.

2) <u>All the references teach away from the claimed method of analyzing and modeling enterprise financial performance by element of value</u>. Bielinski teaches the use of a single tree of equations to calculate an enterprise value from historical cash flow. The portion of the tree used for calculating historical cash flow is built by joining together a series of nodes where the inputs to each node are mathematically combined to produce a node output that becomes an input to a node at a higher level in the tree. The inputs to the VBM cash flow tree consist of:

- activities (i.e. volume of calls received, number of transactions completed and pounds of material used),
- counts (i.e. number of service delivery centers and number of employees),
- expenditure data (i.e. material costs, employee annual salary and cost per station), and
- summary financial measures (i.e. inventory turnover ratio and sales growth rate)

These low level inputs mathematically combine to produce the summary accounting numbers used for calculating the historical cash flow. By way of contrast, the claimed invention teaches that elements of value drive current operation cash flow (and the other categories of value) and that statistical summaries of element of value performance are the only inputs to the models of each category of value – including the current operation model.

Aspect of financial performance	Designation per 09/764,068	Designation per Bielinski
Raw material cost	Sub-component of expense value	Operational value driver
Production labor cost	Sub-component of expense value	Operational value driver

Consistent with the different teachings regarding the drivers of enterprise financial performance, Bielinski teaches a different definition of "value driver" and defines sub-components of expense value as operational value drivers (see Table). Baur also teaches away from analyzing and modeling an enterprise by element of value as it focuses exclusively on the correlation between investor sentiment and weekly price changes for the S&P 500 (see Evidence Appendix, pages 64 – 67). Share prices reflect the combined contribution of all the elements of value in an enterprise. Lyons also teaches away from analyzing and modeling enterprise financial performance by element of value as it focuses exclusively on manipulating traditional financial statements which (as is well known in the art) generally focus on book value and do not include the claimed elements of value: alliances, brands, channels, customers, employees, intellectual property, partnerships, processes and vendors. Affects claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75.

3) Bielinski teaches away from the claimed method of multivariate statistical analysis of enterprise financial performance. Bielinski teaches the use of a single tree of equations to calculate the actual amount of enterprise cash flow and an enterprise value. By teaching a reliance on actual numbers, Bielinski teaches away from statistical analysis. As noted in Reason #5, changing this aspect of the Bielinski invention destroys its ability to function (see Evidence Appendix, pages 68 – 72). Affects claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75.

4) Bielinski teaches away from designating employees and processes as elements of value. Contrary to the statement made in the March 31, 2009 Office Action, Bielinski does not teach the analysis of alliance, employee, partners, processes and/or vendors as elements of value (or anything else). None of these elements of value are mentioned specifically by name in the Bielinski document. Bielinski does mention human resource costs, material costs and scrap costs and as such teaches that human resources and

processes that use materials are liabilities that should be minimized and not elements of value that should be maximized. Affects claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75.

5) <u>Bielinski teaches away from the claimed method of analyzing enterprise financial performance by teaching and relying on different assumptions</u>. Bielinski teaches the use of a single tree of equations to calculate an enterprise value and that enterprise cash flow is the sole determinant of value. Implicit in these teachings are three assumptions that teach away from the claimed method: the relationship between input values and actual cash flow is linear, there is no need to consider factors that have an indirect relationship to cash flow and the market is strong form, market efficient (aka market sentiment value is zero). Bielinski does not teach that there is more that there is any alternative to reliance on the assumptions outlined above and shown in the Table below.

Assumptions	09/764,068	Bielinski
Relationship of inputs to actual levels	None, inputs may have a linear or non-linear effect on the value of the categories of value	Inputs have a linear effect on cash flow
Inputs analyzed	Elements of value that may have a direct and/or an indirect impact on category values	Activities, counts, expenditures and summary measures that have a direct relationship to cash flow
Market efficiency	None, market may be strong form, efficient (market sentiment value is zero) or it may be inefficient (market sentiment value may be above or below zero)	Market is strong form, efficient (aka standard valuation model) and market sentiment value is zero

By way of contrast, the claimed inventions teach and rely on the fact that a model for cash flow or other categories of value can utilize a non-linear and/or an indirect relationship between input values and the actual value. In a similar fashion, the claimed invention does not make any assumptions about market efficiency (see Table). Affects claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75.

6) <u>Bielinski and Bigus teach away from the claimed method of optimizing an enterprise value</u>. Bielinski teaches the use of sensitivity analysis and break even analysis to identify desirable changes in operation. Bigus teaches the optimization of computer tasks. By way of contrast, the claimed invention teaches and relies on the use of optimization

analyses to identify the most desirable set of changes in a business operation. Affects claim 37, claim 38 and claim 45.

7) <u>Bielinski teaches away from the claimed method of quantifying and optimizing a future enterprise market value</u>. Bielinski teaches away from the use of projections that are required for a future value optimization analysis by teaching a strict reliance on five years of historical cash flow. Bielinski also teaches away from the claimed optimization analysis method as discussed under item 6 above. By way of contrast, the claimed invention teaches the use of forecasts (aka projections) as part of a market value optimization analysis. Affects claim 37, claim 38 and claim 45.

Because the cited documents all exclusively teach methods that teach away from the claimed methods, the prima facie case of obviousness cannot be properly established. Affects claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75.

Reason #2 –the second reason that the cited combination of documents fails to establish a prima facie case of obviousness that would support the rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 is that <u>the cited combination does not teach or suggest one or more limitation for every rejected claim</u>. *It is well established that "when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim.* Limitations not taught or suggested by the cited combination include:

<u>Claim 36 and claim 55</u>. (affects claims 37, 38, 39, 40, 41, 42, 43, 44 and 45). Limitations not taught or suggested include:

a) transforming at least a portion of the data into a model of an enterprise market value or a future market value by an element and category of value by completing a series of multivariate analyses that utilizes said data

b) where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof,

c) where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value, and

d) where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

Claim 37. Limitations not taught or suggested include:

a) identifying a set of changes that will optimize an enterprise market value,

b) quantifying a future enterprise market value,

c) valuing an enterprise market sentiment,

d) calculating a real option discount rate, and

e) valuing a real option.

Claim 38. Limitations not taught of suggested include: i*dentifying one or more changes that will optimize one or more aspects of financial performance where said aspects of financial performance are selected from the group consisting of revenue, expense, capital change, cash flow, real option value, future market value, market sentiment value, market value and combinations thereof.*

Claim 39. Limitations not taught of suggested include: *completing a series of multivariate analyses that are selected from the group consisting of identifying one or more previously unknown item performance indicators, discovering one or more previously unknown value drivers, identifying one or more previously unknown relationships between one or more value drivers, identifying one or more previously unknown relationships between one or more elements of value, quantifying one or more inter-relationships between value drivers, quantifying one or more impacts between elements of value, developing one or more composite variables, developing one or more vectors, developing one or more causal element impact summaries, identifying a best fit combination of a predictive model algorithm and one or more element of value impact summaries for modeling enterprise market value and each of the components of value, determining a net element impact for each category of value, determining a relative strength of the elements of value between*

two or more enterprises, developing one or more real option discount rates, calculating one or more real option values, calculating an enterprise market sentiment value by element and combinations thereof.

Claim 40. Limitations not taught of suggested include: *a method where a predictive model algorithm is selected from the group consisting of classification and regression tree; generalized autoregressive conditional heteroskedasticity, regression; generalized additive; redundant regression network; rough-set analysis; Bayesian; multivariate adaptive regression spline and support vector method.*

Claim 41. Limitations not taught of suggested include: *where data are obtained from web site systems, the Internet, external databases and combinations thereof.*

Claim 42. Limitations not taught of suggested include: *using one or more composite applications to complete the processing.*

Claim 43. Limitations not taught of suggested include: *a model of enterprise market value further that comprises a combination of component and category of value models selected from the group consisting of up to three predictive component of value models, a real option discount rate model, a real option valuation model, a market sentiment model by element of value and combinations thereof.*

Claim 45. Limitations not taught of suggested include: *identifying one or more changes that will optimize a future market value portion of said enterprise market value.*

Claims 47 and 75. Limitations not taught or suggested include: *where the elements of value are customers alliances, brands, channels, employees, intellectual property, partnerships, processes, vendors and combinations thereof.*

Claim 58. Limitations not taught or suggested include: *a net contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element impacts on other elements of value within said category of value.*

Claim 59. Limitations not taught or suggested include: a causal model of an element of value contribution to an organization value further comprises a plurality of models selected from the group consisting of predictive component of value models, predictive market value models, relative element strength models, real option discount rate models, real option valuation models, market sentiment models and combinations thereof.

Claim 60. Limitations not taught or suggested include: The method of claim 55 where a net contribution for each of one or more elements of value further comprises a direct contribution to a value of a category of value net of any impact on other elements of value.

Claim 61. Limitations not taught or suggested include: *categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof.*

Claim 62. Limitations not taught or suggested include: *where the future market value portion of organization market value further comprises a summation of values selected from the group consisting of the real option value, the portion of current operation value caused by elements of value, the portion of market sentiment value caused by elements of value and combinations thereof.*

Claim 63. Limitations not taught or suggested include: *value driver changes that will optimize future market value are identified by algorithms selected from the group consisting of monte carlo algorithms, genetic algorithms, multi criteria optimization algorithms and combinations thereof.*

Claim 72. (affects claims 73, 74 and 75) Limitations not taught or suggested include: *transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof, using the tangible contribution for each element of value to identify a market value for each element of value, and reporting the value of each element of value in a balance sheet format.*

Claim 74. Limitations not taught or suggested include: *tracking a change in a value of each of one or more elements of value over time, and including the calculated changes in value of each element of value in an income statement or a cash flow statement.*

Reason #3 - The third reason claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable is that the required modification of Bielinski would change several principles of operation of the Bielinski invention.   It is well established that when "*the proposed modification or combination of the prior art would change*

the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)". Bielinski which is the primary reference for all obviousness rejections, teaches and relies on four principles of operation that would have to be changed to replicate the functionality of the claimed invention.

1) One principle of operation Bielinski relies on is the standard model which teaches that cash flow is the sole determinant of enterprise value. This principle of operation would have to be changed to replicate the functionality of the claimed invention and recognize the fact that enterprise value includes a number of categories of value (i.e. real options, market sentiment) that are not included in the standard model (see Evidence Appendix, page 75).

2) A second principle of operation that Bielinski relies on is that a single tree of equations can be used to identify the inputs that are related to the actual amount of enterprise cash flow, calculate prior period cash flow and calculate an enterprise value (see Evidence Appendix, pages 68 - 72). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions rely on a series of multivariate statistical analyses where the only inputs are element of value impact summaries and the primary outputs are between one and zero (category valuations are determined separately). A single tree of equations cannot be used to determine the actual amount of enterprise cash flow and/or calculate an enterprise value from the inputs used in the claimed analyses and changing to a series of analyses using statistical models for identifying relative contributions and separate models for calculating segment valuations would be a change in another principle of operation of the Bielinski invention.

3) A third principle of operation that Bielinski teaches and relies on is that activities, counts, expenditures and summary measures determine cash flow and that value drivers are high level summaries of enterprise financial performance (i.e. operating profit margin). Bielinski also teaches that operational value drivers are sub-components of expense value (i.e. raw material cost, human resource cost), and/or summary financial statistics (inventory turnover and sales growth percentage). This principle of operation would have to be changed to replicate the functionality of the claimed inventions because the claimed inventions teach and rely on the fact that elements of value drive cash flow (and other segments of value) and that value drivers are characteristics of elements of value.

4) A fourth principle of operation that Bielinski teaches and relies on is that analyses of cash flow only require consideration of the factors that have a direct, linear relationship to

the actual cash flow. By way of contrast, the claimed invention teaches and relies on the fact that elements of value may have an indirect and/or non linear impact on cash flow and/or a category valuation. The fourth principle of operation would have to be changed to add a consideration of the factors that have an indirect and/or non-linear relationship to cash flow to the analysis method taught by Bielinski.

Because the required modification of Bielinski would change four of its principles of operation, the prima facie case of obviousness cannot be properly made.

Reason #4 - The fourth reason claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable is that the proposed theoretical combination would change the principles of operation of the inventions described in the Baur, Bigus and Lyons references. It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table below.

Reference	Principle of operation	Principle change required
Baur	Investor sentiment is a factor that may have an impact on share prices	Market sentiment is a category of value with a value that is a function of element of value performance
Bigus	Create a plurality of modules for performing the same function in alternate manners before identifying and exclusively using the one best module (C8, L14)	Create plurality of agents (or bots) for performing the same function in alternate manners and continually use the best set of results from all of the different agents
Lyons	Redundantly store and analyze financial statement data using a spreadsheet	Efficiently store and analyze data representative of the organization's physical operation using intelligent agents or bots and predictive models

Because the required modification of Baur, Bigus and Lyons would change their principles of operation, the prima facie case of obviousness cannot be properly made.

Reason #5 - The fifth reason claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim

63, claim 72, claim 73, claim 74 and claim 75 are patentable is that the required modification would destroy the intent, function and purpose of the Bielinski invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The claimed computational model of enterprise market value by element of value and category of value comprises predictive models for one or two categories of value, the current operation and/or market sentiment categories of value. Bielinski teaches and relies on a single tree of equations to identify the inputs that are related to the actual amount of enterprise cash flow, calculate the cash flow and calculate an enterprise value. Modifying the Bielinski invention to use a predictive model that completes a statistical analysis for all or part of the tree would destroy its ability to perform its intended function (see Evidence Appendix, pages 68 - 72). It should be noted that if the Bielinski tree were not modified to use a predictive model, then it would not be able to replicate any of the functionality of the claimed invention. Because the required modification of Bielinski would destroy its function, the prima facie case of obviousness cannot be properly made.

Reason #6 – The sixth reason claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable is Reason #6 advanced under Issue 2.

Reason #7 - The seventh reason claim 40 is patentable is that the proposed theoretical combination would destroy the intent, function and purpose of the Bigus invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The function of the Bigus invention is to use objective criteria to select between a plurality of agents or between a plurality of program modules. Program modules may have duplicate functionality that is implemented in alternate manners. In accordance with the Bigus invention when alternatives are available for completing the same function <u>only one alternative for completing the function may be selected</u> (see Bigus, Column 8, Line 14). By way of contrast, the claimed invention creates a plurality of agents (or bots) with duplicate functionality implemented in alternate manners and continually uses the best set of results from all of the different agents. Modifying the Bigus invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose of objectively selecting <u>the one best alternative</u>. Because the

required modification of the Bigus invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made.

Reason #8 – The eighth reason claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 45, claim 47, claim 55, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 72, claim 73, claim 74 and claim 75 are patentable is that the Examiner has not been able to explain the rationale for modifying the cited combination of references to replicate the functionality of the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at l, 82 USPQ2d at 1396).'"* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi and Bigus inventions and modify the principle of operation of all the references as discussed under Reason #3, Reason #4, Reason #5 and Reason #7. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under Reason #1 and Reason #2. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has simply noted that documents containing some of the same words and word pairs used in the claims have been identified, made apparent material misrepresentations regarding the document teachings and then made a series of conclusory statements that it would be obvious to modify their teachings to replicate the claimed invention. <u>Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established</u>.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

Issue 2 - Whether claim 49, claim 50, claim 51 and claim 52 are patentable under 35 USC §103(a) over Bielinski in view of Mauboussin or in view of Stork?

The claims are patentable for several reasons. The primary reason is that the cited combination

of documents (Bielinski, Mauboussin and Stork) and the arguments related to the cited combination of documents fail to establish a prima facie case of obviousness for a number of reasons for every rejected claim as detailed below.

Reason #1 – The first reason claim 49, claim 50, claim 51 and claim 52 are patentable is Reason #1 advanced under Issue 1, all the cited documents teach away from the claimed invention. In addition to the orthogonal teachings identified previously under Issue 1 - Reason #1, Mauboussin and Stork also teach away from the claimed invention as detailed below:

8) Mauboussin teaches away from the claimed method of valuing real options. The claimed invention teaches valuing real options with a discount rate that comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value. Mauboussin teaches away by teaching that real options should be valued using the risk free interest rate for discounting.

9) Stork teaches away from the claimed method of learning from the data. The claimed invention teaches learning from the data with a method that immediately incorporates the benefits of learning into the development of a better model. Stork teaches away by teaching a method that does not incorporate the benefits of learning until a second generation has been created. This principle of operation is consistent with the Central Dogma of molecular genetics.

10) Stork teaches away from the claimed method of predictive model development. The claimed invention teaches selecting the best predictive model from a plurality of different types of predictive models. Stork teaches away from the claimed method by teaching an exclusive focus on the use of neural network models.

11) Stork teaches away from the claimed method of neural network model development. The claimed invention teaches that when neural network models are selected as the best predictive model for use they should be developed using a multi stage process that involves the refinement of variable selection using vector creation algorithms after an initial neural network model has been developed. The refined variables may then be used as inputs to a final model. Stork teaches away from the claimed method by teaching the use of genetic algorithms to refine input variable selection.

12) Stork teaches away from the claimed method of using predictive models for regression analysis. The claimed invention teaches the development and use of causal predictive models for regression analysis. Stork teaches away from the claimed method

by teaching the use of predictive models for classification.

Reason #2 –the second reason that the cited combination fails to establish a prima facie case of obviousness that would support the rejection of claim 49, claim 50, claim 51 and claim 52 is that <u>the cited combination does not teach or suggest one or more limitation for every rejected claim</u>. *It is well established that "when determining whether a claim is obvious, an examiner must make 'a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.' In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Thus, 'obviousness requires a suggestion of all limitations in a claim.' CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing In re Royka, 490 F.2d 981, 985 (CCPA 1974)) Furthermore, the Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim.* Limitations not taught or suggested by the cited combination include:

<u>Claim 49</u>. Limitations not taught or suggested include:

a) identifying one or more elements of value that make a causal contribution to an organization market value,

b) computing a difference between a real option value calculated using the company cost of capital as the discount rate and a value calculated using a real option discount rate comprised of a base discount rate plus a risk factor for each element of value that makes a causal contribution to organization market value; and

c) assigning the value difference to the different elements of value based on their relative contribution to a calculated difference in the two discount rates.

<u>Claim 50</u>. Limitations not taught or suggested include: element of value contributions are identified by learning from the data.

<u>Claim 51</u>. Limitations not taught or suggested include: *the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value.*

<u>Claim 52</u>. Limitations not taught or suggested include:

a) identifying one or more value drivers for each element of value,

b) developing one or more element impact summaries from said value drivers for market value and each component of value,

c) identifying a best fit combination of element impact summaries and predictive model algorithm for modeling market value and each component of value,

d) determining a relative strength for each of the elements of value causal to market value change vis a vis competitors,

e) calculating a real option discount rate using the relative element strength information for the elements that support the real option,

f) calculating a real option value and identifying a contribution to real option value by element of value using said real option discount rate, and

g) identifying a net element contribution to enterprise market value by category of value by combining the results from the processing completed in steps a through f.

Reason #3 – The third reason claim 49, claim 50, claim 51 and claim 52 are patentable is Reason #3 advanced under Issue 1.

Reason #4 - The fourth reason claim 49, claim 50, claim 51 and claim 52 are patentable is that the proposed theoretical combination would change the principles of operation of the inventions described in the Mauboussin and Stork references.

Reference	Principle of operation	Principle change required
Mauboussin	Value real options using the risk free rate	Value real options with a discount rate that comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value
Stork	Incorporate the benefits of learning in a second generation model	Immediately incorporate the benefits of learning into improving model performance

It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table above. Because the required modification of Mauboussin and Stork would change their principles of operation, the prima facie case of obviousness cannot be properly made.

Reason #5 – The fifth reason claim 49, claim 50, claim 51 and claim 52 are patentable is Reason #5 advanced under Issue 1.

Reason #6 - The sixth reason claim 49, claim 50, claim 51 and claim 52 are patentable is that the claim rejections are non-statutory. As detailed in the preceding discussion, the obviousness rejections all appear to be based of a non-existent standard for obviousness – "mentions the same word pairs as another document" instead of "teaches or suggests an invention with all the same claim limitations to someone of average skill in the relevant arts". It is well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* Furthermore, the selection of the Baur, Bielinski, Bigus, Lyons, Mauboussin and Stork documents in an attempt to support an obviousness rejection for the claimed invention provides substantial evidence that those authoring the March 31, 2009 Office Action for the instant application appear to lack the level of skill in the art required to author a rejection for obviousness and/or for an alleged written description deficiency. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art" Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest Baur, Bielinski, Bigus, Lyons, Mauboussin and/or Stork as a reference in support of an obviousness rejection for the claimed inventions. Summarizing the preceding discussion, the claim rejections are non statutory because they have been authored by individuals who appear to lack the level of skill in the art required to author such rejections and because they fail to consider all claim limitations.

Reason #7 – The seventh reason claim 49, claim 50, claim 51 and claim 52 are patentable is that the Examiner has not been able to explain the rationale for modifying the cited combination of references to replicate the functionality of the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).'"* In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi invention and modify the principle of operation of all the references as discussed under Reason #3, Reason #4 and Reason #5. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every

claim limitation as discussed under Reason #1 and Reason #2. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has simply noted that documents containing some of the same words and word pairs used in the claims have been identified, made apparent material misrepresentations regarding the document teachings and then made a series of conclusory statements that it would be obvious to modify their teachings to replicate the claimed invention. <u>Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established</u>.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

Issue 3 – Whether claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable under 35 USC §103(a) over Davis in view of Bielinski, in view of Srivastava or in view of Cleland?

The claims are patentable for several reasons. The primary reason is that the cited combination of documents (Bielinski, Cleland, Davis and Srivastava) and the arguments related to the cited combination of documents fail to establish a prima facie case of obviousness for a number of reasons for every rejected claim as detailed below.

<u>Reason #1</u> – The first reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is Reason #1 advanced under Issue 1, all the cited documents teach away from the claimed invention. In addition to the orthogonal teachings identified previously under Issue 1 - Reason #1, Davis, Cleland and Srivastava also teach away from the claimed inventions as detailed below:

8) <u>Davis teaches away from the claimed method of predictive model development</u>. The claimed invention teaches using independent components of application software to acquire data that has already been integrated using xml and a common schema and transform the data into a predictive model. Transforming data into a predictive model comprises the identification of relevant data variables that will be included in a model. Davis teaches away by teaching the use of a viewer (100) that relies on a tree view defined by a common data type definition (dtd) to transform, format, manipulate and display data that has been pre-specified by line into a small amount of RDML data.

9) <u>Davis teaches away from the claimed method of creating an integrated database</u>. The

claimed invention teaches the creation of a single, integrated database with all the data obtained from a plurality of sources using xml and a common schema. Davis teaches away by teaching:

a) the storage of information that guides the conversion of data from a plurality of sources to an RDML format in an image database (226) that is separate from the source databases (230),

b) the placement of RDML conversion information (504) in the source databases (230),

c) the use of a common data type definition (dtd) to organize data from different systems, and

d) that conversion information and source data should be combined in accordance with a common dtd using a viewer (100) or formatter (216) to produce documents (102) or views (108) that contain small amounts of data in an RDML format on demand.

10) <u>Davis teaches away from the claimed method of using a common schema as the basis for data integration</u>. The claimed invention teaches integrating, converting and storing all source data in a single database using xml and a common schema. Davis teaches away by teaching the use of a xml 1.0 compliant tree view as the basis for combining data from different sources. Davis also teaches the separate storage of source data (230) and conversion information in an image database (226).

11) <u>Davis teaches away from the claimed method of metadata mapping</u>. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Davis teaches away by teaching data field mapping from source databases to an RDML document (see Davis, Column 15, lines 24 – 26).

12) <u>Davis teaches away from the claimed method of storing data</u>. The claimed invention teaches the storage of data in an integrated database in accordance with a common schema. Davis teaches away by teaching the storage of data by line in accordance with a common dtd (see Davis, Column 21, line 58) in RDML documents. The RDML documents are stored as a vector, hash table or dictionary (see Davis, Column 33, line 65).

13) <u>Cleland teaches away from the claimed method of predictive model development</u>. The claimed invention teaches using predictive models to objectively analyze the impact of elements of value such as customers on financial performance. Cleland teaches away from the claimed method by teaching a reliance on subjective impressions regarding quality and comparability for measuring the value of enterprise offerings to customers.

14) <u>Cleland teaches away from the claimed method of analysis</u>. The claimed invention teaches the analysis and measurement of the value of customers and a plurality of other elements of value to an organization. Cleland teaches the analysis and measurement of organization offerings to customers.

15) <u>Srivastava teaches away from the claimed method of metadata mapping</u>. The claimed invention teaches mapping metadata from source databases to a database schema defined by xml metadata. Srivastava teaches away by teaching document element mapping from xml documents to a database schema (see Srivastava, Column 8, lines 37 – 41).

16) <u>Srivastava teaches away from the claimed method of creating an integrated database</u>. The claimed invention teaches using the metadata mapping information obtained from a plurality of source databases to create a single, integrated database with a common schema defined by xml metadata. Srivastava teaches away by teaching:

a) extracting metadata and time-based samples from a media file,

b) collecting additional metadata describing the media file from sources external to the file,

c) producing a summary of the media file from the data collected in a) and b), and

d) creating an integrated database by mapping elements from the summaries to a database schema along with the source XML data and the original media file.

17) <u>Lyons teaches away from the claimed method of integrating data</u>. The claimed invention teaches efficiently storing data in accordance with xml and a common schema. Lyons teaches away from the claimed method by teaching the massively redundant storage of data in accordance with a predetermined pattern relative to a SEPT value.

Reason #2 –the second reason that the cited combination of documents fails to establish a prima facie case of obviousness that would support the rejection of claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 is that <u>the cited combination does not teach or suggest one or more limitation for every rejected claim</u>. *The Board of Patent Appeal and Interferences recently confirmed (In re Wada and Murphy, Appeal No. 2007- 3733) that a proper, post KSR obviousness determination still requires that an examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." In re Ochiai, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). In other words, obviousness still requires a suggestion of all the limitations in a claim.* Limitations not

taught or suggested by the cited combination include:

Claim 64 (affects claim 65, claim 67, claim 68 and claim 69). Limitations not taught or suggested include:

a) *using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance, and*

b) *where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard.*

Claim 65. Limitations not taught or suggested include: *independent components of application software can be flexibly combined as required to support the development of one or more useful results.*

Claim 67. Limitations not taught or suggested include: *independent components of application software that complete processing selected from the group consisting of: analysis, attribute derivation, capitalization, causal analysis, classification, clustering, count linkages, data acquisition, data conversion, data storage, data transformation, element life estimation, indicator selection, induction, keyword counting, keyword match identification, locate linkages, relative strength determination, statistical learning, valuation and vector generation.*

Claim 68. Limitations not taught or suggested include: *a method that produces useful results selected from the group consisting of: element contribution determination, element impact quantification, element valuation, enterprise financial performance optimization, enterprise financial performance simulation, future market value optimization, future market value quantification, management reporting, real option discount rate calculation, real option valuation, share price valuation, and sub-element clustering.*

Claim 69. Limitations not taught or suggested include: *systems selected from the group consisting of alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, the Internet, external databases and combinations thereof.*

Claim 70 (affects claim 71). Limitations not taught or suggested include:

a) integrating, converting and storing data representative of an organization from a plurality of disparate sources in accordance with a common xml schema in order to transform said data into an integrated database,

b) outputting said database

c) establishing a set of integration and conversion rules using a metadata and conversion rules window and saved in metadata mapping table.

Claim 71. Limitations not taught or suggested include: *where each of one or more tables in an application database further comprise one axis that is defined by one or more time periods that require data and another axis that is defined by one or more data categories selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, non-relevant attributes and combinations thereof.*

Reason #3 – The third reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is Reason #3 advanced under Issue 1.

Reason #4 - The fourth reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that the proposed theoretical combination would change the principles of operation of the inventions described in the Cleland, Davis and Srivastava references.

Reference	Principle of operation	Principle change required
Cleland	Determine the value of enterprise offerings to customers	Determine the value of customers to an enterprise
Davis	Identify and store RDML conversion information separately from source data, combine in a viewer or formatter to produce small amounts of data with a common dtd on demand	Identify xml conversion information, integrate and store all converted source data in a single database using a common schema
Davis	Use "data field mapping" to map from source databases to an RDML document defined by a dtd	Use "metadata mapping" to map from source database metadata to integrated database metadata
Davis	Store data by line in accordance with a dtd (see Davis, Column 21, line 58)	Store data by item in accordance with a schema
Srivastava	Analyze source data to develop a summary, store the summary in a database along with the source data	Identify xml conversion information, integrate and store all converted source data in a single database using a common schema
Srivastava	Use "document element mapping" to map elements from xml documents to a	Use "metadata mapping" to map from source database metadata to

	database schema	integrated database metadata

It is well established that when "*the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)*". Principles of operation that would have to be changed to replicate the functionality of the claimed invention are shown in the table above. Because the required modification of Cleland, Davis and Srivastava would change their principles of operation, the prima facie case of obviousness cannot be properly made.

Reason #5 – The fifth reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is Reason #5 advanced under Issue 1.

Reason #6 – The sixth reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that the proposed theoretical combination would destroy the intent, function and purpose of the Davis invention. It is well established that *when a modification of a reference destroys the intent, purpose or function of an invention such a proposed modification is not proper and the prima facie cause of obviousness cannot be properly made (In re Gordon 733 F.2d 900, 221 U.S.PQ 1125 Fed Circuit 1984)*. The function of the Davis invention is to use common dtd to organize, manipulate and present data in a graph or table by line (Davis, Column 21, Line 58). In accordance with the Davis invention, the data that will analyzed and/or presented in a graph or table must be known before the data from different sources can be combined. By way of contrast, the system of the present invention stores data in accordance with a common schema and determines which data are to be analyzed or presented in a graph or table only after a series of analyses that rely on data in the integrated database have been completed. In accordance with the claimed invention, the data that will be included in an analysis, graph or table can only be determined after the data have been combined in an integrated database. Modifying the Davis invention to replicate the functionality of the claimed invention would destroy its ability to perform its intended function and purpose. Because the required modification of the Davis invention would destroy its intended function and purpose, the prima facie case of obviousness cannot be properly made.

Reason #7 – The seventh reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that the Examiner has not been able to explain the rationale for modifying the cited combination of references to replicate the functionality of the claimed invention. *The Supreme Court in KSR noted that the analysis supporting a rejection under 35*

U.S.C. 103 should be made explicit. The Court quoting In re Kahn 41 stated that "'[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness (KSR, 550 U.S. at I, 82 USPQ2d at 1396).'" In spite of this well know requirement, the Examiner has not provided the required explanation. In particular, the Examiner has not explained what would motivate someone of average skill in the art to destroy the functionality of the Bielinksi and Davis inventions and modify the principle of operation of all the references as discussed under Reason #3, Reason #4, Reason #5 and Reason #6. This explanation is particularly important when one considers that the cited documents teach away from all claimed methods and/or fail to teach or suggest almost every claim limitation as discussed under Reason #1 and Reason #2. In place of an explanation with articulated reasoning and a rational underpinning the Examiner has simply noted that documents containing some of the same words and word pairs used in the claims have been identified, made apparent material misrepresentations regarding the document teachings and then made a series of conclusory statements that it would be obvious to modify their teachings to replicate the claimed invention. Because no rational underpinning has been provided to support the legal conclusion of obviousness, the prima facie case of obviousness cannot be properly established.

Reason #8 – The eighth reason claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that the claim rejections are non-statutory. As detailed in the preceding discussion, the obviousness rejections all appear to be based of a non-existent standard for obviousness – "mentions the same word pairs as another document" instead of "teaches or suggests an invention with all the same claim limitations to someone of average skill in the relevant arts". It is well established that the *"Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." In re Lowry, 32 F.3d 1579, 1582 (Fed. Cir. 1994).* Furthermore, the selection of the Bielinski, Cleland, Davis, Lyons and Srivastava documents in an attempt to support an obviousness rejection for the claimed invention provides substantial evidence that those authoring the March 6, 2009 Office Action for the instant application appear to lack the level of skill in the art required to author a rejection for obviousness and/or for an alleged written description deficiency. It is well established that the *"hypothetical 'person having ordinary skill in the art' to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art." Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988).* It is unlikely that anyone who understood the scientific and engineering principles applicable to the pertinent art would ever suggest

Bielinski, Cleland, Davis, Lyons and Srivastava as a reference in support of an obviousness rejection for the claimed inventions. Summarizing the preceding discussion, the claim rejections are non statutory because they have been authored by individuals who appear to lack the level of skill in the art required to author such rejections and because they fail to consider all claim limitations.

Summarizing the above, the Appellant respectfully submits that the Examiner has failed to produce the evidence required to satisfy the requirements of the APA and/or establish a prima facie case of obviousness for a single claim. These failures provide additional evidence that the claimed inventions are new, novel and non-obvious.

Issue 4 - Whether claim 46, claim 48, claim 53 and claim 54 are anticipated under 35 USC §102(b) by Bielinski?

The claims are patentable because the arguments in the March 31, 2009 Office Action fail to establish a prima facie case or anticipation and because the claim rejections fail to meet the requirements of the APA as detailed below.

<u>Reason #1</u> - The first reason that claim 46, claim 48, claim 53 and claim 54 are patentable is that the Bielinski document fails to establish a prima facie case of anticipation because it fails to describe every element of the rejected claims. It is well established that: *"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).* Elements missing by claim include:

<u>Claim 46</u> - Elements that are not expressly or inherently described include: *a) a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to perform an element method –* the Bielinski document does not mention programs or program storage devices of any kind. The arithmetic described by Bielinski is apparently completed by a computer but this does not teach or imply that a program should instruct a computer to complete any of the steps listed below,

b) preparing data representative of an organization for use in processing – the Bielinski document does not teach that data are prepared by a computer in accordance with instructions from a program storage device. Furthermore, preparing the data required for completing the arithmetic described by Bielinski can readily be done manually and does

not suggest the use of a computer being instructed by a program storage device to complete this task,

c) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value, and – Bielinski does not teach that data are transformed into a causal model, Bielinski does not teach that a causal model identifies and/or outputs a tangible value contribution of each of one or more elements of value and Bielinski does not teach real options. Furthermore, completing the arithmetic described by Bielinski does not suggest: that data be transformed into a causal model, that a causal model identifies and/or outputs a tangible value contribution of each of one or more elements of value and/or that real options need to be evaluated,

d) reporting the value contribution of the elements of value using an electronic display or a paper document – Bielinski does not teach or suggest reporting value contributions from any elements of value - it only provides an enterprise valuation (also, see c) above).

Claim 48 - Elements that are not expressly or inherently described include:

a) The program storage device of claim 46 - see a) from claim 46 above, *and*

b) where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value - Bielinski does not teach the identification and/or output of: a direct contribution of each of one or more elements of value to each of one or more categories of value or an impact of one or more elements of value on other elements of value. Furthermore, Bielinski does not suggest: that a direct contribution or an impact of each of one or more elements of value should be identified and/or output.

Claim 53 - Elements that are not expressly or inherently described include:

a) The program storage device of claim 46 -see a) from claim 46 above, *and*

b) where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time – Bielinski does not teach or suggest calculating a value for any elements of value for any points in time. The only thing the Bielinski invention values is enterprise cash flow.

Claim 54 - Elements that are not expressly or inherently described include:

a) The program storage device of claim 46 - see a) from claim 46 above, and

b) where the net relative contribution for each element of value to each category of value further comprises a net causal contribution – see c) from claim 46 above.

Reason #2 - The second reason that claim 46, claim 48, claim 53 and claim 54 are patentable is that the Bielinski document fails to establish a prima facie case of anticipation because it fails to provide the same level of detail that is present in the claim. It is well established that: *"The identical invention must be shown in as complete detail as is contained in the .. claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).* Details missing by claim include:

Claim 46 - Elements that are not described in the same level of detail include:
a) a program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to perform an element method
b) preparing data representative of an organization for use in processing
c) transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value, and
d) reporting the value contribution of the elements of value using an electronic display or a paper document.

Claim 48 - Elements that are not described in the same level of detail include:
a) The program storage device of claim 46, and
b) where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.

Claim 53 - Elements that are not described in the same level of detail include:
a) The program storage device of claim 46, and
b) where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time.

Claim 54 - Elements that are not described in the same level of detail include:
a) The program storage device of claim 46, and
b) where the net relative contribution for each element of value to each category of value further comprises a net causal contribution.

Reason #3 - The third reason that claim 46, claim 48, claim 53 and claim 54 are patentable is that the March 31, 2009 Office Action does not describe the basis in fact or technical reasoning that is required to support the statements regarding allegedly inherent characteristics contained in the Bielinski document. It is well established that that: *"in relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).* In spite of this well known requirement, no explanation was provided.

Reason #4 - The fourth reason that claim 46, claim 48, claim 53 and claim 54 are patentable is that the methods disclosed in the Bielinski document do not enable the completion of a single claim. Replicating the functionality of the rejected claims would require the alteration or removal of a number of methods taught by Bielinski. It would also require the addition of a number of new capabilities not described by Bielinski. Extensive and undue experimentation would be required to support both steps. It is well established that that: *"in order to anticipate a claimed invention, a prior art reference must enable one of ordinary skill in the art to make the invention without undue experimentation. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1336 (Fed. Cir. 2008) (citing In re Omeprazole Patent Litig., 483 F.3d 1364, 1379 (Fed. Cir. 2007)).*

Methods that would have to be altered or removed (aka unlearned) include the:
1) exclusive reliance on actual numbers to complete analyses,
2) exclusive reliance of cash flow to calculate enterprise value,
3) exclusive focus on factors that are directly related to cash flow,
4) exclusive use of linear models,
5) exclusive use of activities, counts, expenditures and summary financial measures for model inputs,
6) exclusive focus on element of value related expenditures,
7) exclusive focus on historical financial data, and
8) exclusive reliance on the efficient market hypothesis.

It is well known to those of average skill in the art that unlearning "known" methods is often the most difficult part of learning for people of all ages (see Evidence Appendix, page 63 for confirmation). Extensive and undue experimentation would be required to reveal the fact that the listed Bielinski methods have serious shortcomings and should be unlearned (or forgotten). After this extensive and undue experimentation revealed the need for unlearning, there would still be a need for additional experimentation to discover the new capabilities that should be

added and the best way to add said capabilities. In particular, additional experimentation would be required to determine:

9) that real option values may be required for accurately calculating an enterprise value,

10) that the stock market may not always be efficient and that an analysis of market sentiment value may be required to accurately calculate an enterprise value,

11) that elements of value may be directly or indirectly causal to enterprise revenue levels,

12) that elements of value may be directly or indirectly causal to enterprise capital change,

13) that elements of value may have a direct or indirect impact on other elements of value,

14) that elements of value may be directly or indirectly causal to real option values,

15) that elements of value may be directly or indirectly causal to market sentiment values,

16) that elements of value may have a linear or non-linear relationship to the components of value (revenue, expense and capital), the categories of value (current operation, market sentiment, real option) and/or to other elements of value,

17) a method for statistically summarizing the performance of each of a plurality of elements of value,

18) a method for automatically creating the statistical summaries of item 17,

19) a method modeling the contribution of each of a plurality of elements of value to the components of value and current operation value using the summaries from item 18,

20) a method for automatically creating the models of item 19,

21) a method of quantifying the contribution of each element of value to the components of value and current operation using the output from the models of item 20,

22) a method modeling the contribution of each of a plurality of elements of value to real option values using the summaries from item 18,

23) a method for automatically creating the models of item 22,

24) a method of quantifying the contribution of each element of value to each real option value using the output from the models of item 23,

25) a method modeling the contribution of each of a plurality of elements of value to market sentiment value using the summaries from item 18,

26) a method for automatically creating the models of item 25, and

27) a method of quantifying the contribution of each element of value to market sentiment value using the output from the models of item 26.

The required experimentation would clearly be excessive and undue because the references disclosed to date do not support the development of any of the methods outlined above (i.e. items 10 through 27).

Reason #5 - The fifth reason that claim 46, claim 48, claim 53 and claim 54 are patentable is that the Bielinski document does not have all the elements of the claims and it does not arrange them in the same manner disclosed in any of the claims. It is well established that: *the reference must not only disclose all elements of the claim within the four corners of the document, but it must also disclose those elements "arranged as in the claim" (Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983))*. Missing elements were discussed under Reason #1. Bielinski also fails to arrange elements as they are arranged in the claim. In particular, Bielinski uses a single tree while the claimed invention uses separate statistical models for identifying the contribution of each element of value to each category of value as well as separate models to calculate the value of each category of value. In short, 1 tree instead of six models.

Reason #6 - The sixth reason that claim 46, claim 48, claim 53 and claim 54 are patentable is that the anticipation rejections are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. As detailed under Reason #1, Reason #2, Reason #3, Reason #4 and Reason #5 these rejections fail under the substantial evidence standard.

The Appellant respectfully submits that there are several reasons that the anticipation rejections presented in the March 31, 2009 Office Action fail under the arbitrary and capricious standard. One reason for this failure is that there is no rational connection between the U.S.P.T.O.'s fact-findings associated with the allowance and issue of U.S. Patent 7,283,982 (hereinafter, Pednault) for an invention that completes a model development method similar to the model development method summarized in item 19 under Reason #4 of this Issue and the rejection of claim 46, claim 48, claim 53 and claim 54 for anticipation. As shown under Reason #4, the experimentation required to develop the rejected claims is over 20 times the level of experimentation required to develop the invention described in Pednault. The documented pattern of arbitrarily and capriciously rejecting the Appellant's claims for anticipation when the level of experimentation required to develop the Appellant's inventions are orders of magnitude greater than the level of experimentation required to develop the inventions disclosed in allowed patents for large companies can also be observed in the appeals for U.S. Patent Applications 09/940,450, 10/097,344, 10/166,758 and 10/287,586.

Issue 5 - Whether the invention described in claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 represents statutory subject matter under USC §101?

The claims are patentable because the arguments in the March 31, 2009 Office Action fail to establish a prima facie case non statutory subject matter, because the stated basis for the claim rejections is demonstrably false, because the claimed invention clearly meets the legal requirements for statutory subject matter and because the claim rejections fail to meet the requirements of the APA as detailed below.

Reason #1 - The first way the Appellant will traverse the rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 under 35 U.S.C. §101 is by noting that the Examiner has failed to establish a prima facie case of non statutory subject matter. As noted in MPEP 2106 "*the burden is on the USPTO to set forth a prima facie case of unpatentability. Therefore if USPTO personnel determine that it is more likely than not that the claimed subject matter falls outside all of the statutory categories, they must provide an explanation.(See, e.g., In re Nuitjen, Docket no. 2006-1371 (Fed. Cir. Sept. 20, 2007)(slip. op. at 18)).* In spite of this well known requirement, the Examiner has an unsupported (and incorrect) conclusion regarding patentability without providing the required explanation. In particular the Examiner has failed to explain

1. why she feels the claimed inventions can be completed using mental processes after reading "How much information is too much information?",

2. why the claims are non statutory after considering the fact that the Supreme Court has specifically stated *"[a] process may be patentable irrespective of the particular form of the instrumentalities used"* (*Cochrane v. Deener, 94 U. S. 780),* and

3. why the claims are considered to be non statutory when the Supreme Court and the CAFC (Bilski) have both found the transformation of data regarding real world activities and/or objects into a different state or thing to be statutory subject matter.

In short, the complete absence of a logical explanation leads to the inevitable conclusion that the Examiner has failed to establish a prima facie case that would support a §101 rejection for a single claim.

Reason #2 - The second way the Appellant will traverse the rejection of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 by noting that the stated basis for the claim rejections is demonstrably false.

It is well known to those of average skill in the art that human beings cannot reliably process more than four variables at a time (see Evidence Appendix, pages 80 – 81 for confirmation). Those of average skill in the art will also recognize that claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 72, claim 73 and claim 74 all involve the use of models that require the simultaneous manipulation of numbers of variables that are several orders of magnitude greater than the four variables a human can process with an acceptable degree of accuracy. In a similar fashion, claims 70 and 71 require the simultaneous manipulation of numbers of variables and working memory that are several orders of magnitude greater than four. Putting these facts together it is clear that the stated basis for the claim rejection is demonstrably false and that the claimed inventions cannot be completed solely by the use of mental processes. Furthermore, the stated basis for these claim rejections adds to the substantial evidence that those authoring and/or approving the §101 rejections do not appear to have the capability of understanding the scientific and engineering principles applicable to the pertinent art" (see Issue 2, Reason #6).

Reason #3 –As noted in the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility *"the Supreme Court noted that one example of a statutory "process" is where the process steps provide a transformation or reduction of an article to a different state or thing (Diehr, 450 U.S. at 183, 209 USPQ at 6).* In Alappat, the Court held that *"data, transformed by a machine" "to produce a smooth waveform display" "constituted a practical application of an abstract idea." State Street, 149 F.3d at 1373.* In Arrhythmia, the Court held *"the transformation of electrocardiograph signals" "by a machine" "constituted a practical application of an abstract idea." Id.* Likewise, in State Street, the Court held that *"the transformation of data" "by a machine" "into a final share price, constitutes a practical application of a mathematical algorithm." Id.* Thus, while Diehr involved the transformation of a tangible object - curing synthetic rubber - the Court also regards the transformation of intangible subject matter to similarly be eligible, so long as data represent some real world activity. In re Bilski, 545 F.3d 943, 88 U.S.P.Q.2d 1385 (2008) generally follows these prior decisions and states that the data transformed by a process must represent an object or substance that physically exists.

The third reason claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69 are patentable is that the claimed

inventions are processes for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a model of enterprise financial performance. The model has utility in completing forecasts, analyzing business performance and simulating the impact of changes to the business. As discussed in detail in the summary of claimed subject matter, the transformation of data into a model comes after data representative of the business has been transformed into an integrated database.

The third reason claim 70 and claim 71 are patentable is that the claimed invention is a process for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: an integrated database. The database has utility in enabling forecast development, business performance analyses and simulations.

The third reason claim 72, claim 73 and claim 74 are patentable is that the claimed invention is a machine for transforming data representative of things that physically exist (i.e. a business, customers, vendors, etc.) into a different state or thing: a model of enterprise financial performance. The model has utility in completing forecasts, analyzing business performance and simulating the impact of changes to the business. As discussed in detail in the summary of claimed subject matter, the transformation of data into a model comes after data representative of the business has been transformed into an integrated database.

Reason #4 - The fourth way the Appellant will traverse the §101 rejections of claim 36, claim 37, claim 38, claim 39, claim 40, claim 41, claim 42, claim 43, claim 44, claim 45, claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 64, claim 65, claim 67, claim 68, claim 69, claim 70, claim 71, claim 72, claim 73 and claim 74 is by noting that the assertions regarding the non statutory subject matter are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. The documented pattern of arbitrarily and capriciously rejecting the Appellant's claims that are similar to the claims in patents issued to large companies for allegedly being non-statutory and/or lacking utility can also be observed in appeals for applications 09/761,670, 10/743,417, 10/750,592 and 11/278,419.

The Appellant respectfully submits that the preceding discussion makes it clear that the claimed invention passes the two prong test and that the claims describe inventions that support a number of practical applications with substantial, specific utilities and that they therefore represent statutory subject matter.

Issue 6 – Whether the invention described in claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are enabled under 35 USC 112, first paragraph?

The claims are patentable because the arguments in the March 31, 2009 Office Action fail to establish a prima facie case of a lack of enablement, because the claim rejections fail to meet the requirements of the APA and because the claim rejections are non statutory as detailed below.

<u>Reason #1</u> - The first reason that claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that the Examiner has failed to establish a prima facie case that the specification does meet the enablement requirements of §112 first paragraph. *"A description as filed is presumed to be adequate; unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. Wertheim, 541 F.2d at 263, 191 USPQ at 97. In rejecting a claim, the examiner must set forth express findings of fact regarding the above analysis which support the lack of written description conclusion. These findings should: (A) Identify the claim limitation at issue; and (B) Establish a prima facie case by providing reasons why a person skilled in the art at the time the application was filed would not have recognized that the inventor was in possession of the invention as claimed in view of the disclosure of the application as filed. A general allegation of "unpredictability in the art" is not a sufficient reason to support a rejection for lack of adequate written description."* Furthermore, *it is well established that "the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation." United States v. Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988).* This has been the primary test of enablement since 1916 (see Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916)). *The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination (In re Wands, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir. 1988)). Factors which need to be considered include: the nature of the invention, the state of the prior art, the predictability or lack thereof in the art, the amount of direction or guidance present, the presence or absence of working examples, the breadth of the claims, the relative skill of those in the art and the quantity of experimentation needed (hereinafter referred to as the Wands factors). A conclusion of lack of enablement means that, based on the*

evidence regarding each of the above factors (the Wands factors), the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation (In re Wright, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)). The arguments presented in the February 6, 2009 Office Action fail to establish the prima facie case required to sustain a §112 first paragraph rejection for a single claim in several ways:

1. <u>No evidence has been presented</u>. As noted above, rejection under §112 first paragraph requires a preponderance of evidence and express findings of fact. In spite of this well known requirement, no facts have been identified and no evidence has been presented that excessive experimentation would be required and/or that the full scope of the claimed invention has not been enabled. In place of the required evidence, the Examiner has made conclusory statements that three phrases "an integrated database", "a physical object or substance" and "output said database" are allegedly not described in the specification;

2. <u>The conclusory statements used to support the claim rejections are incorrect</u>. The specification describes a process for developing an application database for an enterprise. The application database is an integrated database. An enterprise is a physical object and the integrated, application database is the output of the process (see Evidence Appendix, pages 76 – 79). Furthermore, U.S. Patent 5,615,109 (which is incorporated by reference) also describes the development of an integrated database. In short, no new matter was introduced by the current set of claims,

3. <u>The Wands factors were not considered</u>. The Examiner has not completed a single aspect of the required Wands factor analysis, and

4. <u>Relevant evidence has been ignored</u>. Evidence that the Examiner has apparently ignored includes a declaration submitted in support of this application. The declaration represents the only known independent review of the instant patent specification by an individual with average skill in the relevant arts under either the pre or post KSR standards for determining the possession of said level of skill. It completely rebuts the Examiner's contentions regarding the claims (see Evidence Appendix, pages 76 – 79).

Reason #2 - The second reason that claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that there is no statutory basis for the claim rejections. The use of a term in a claim that is not ipsis verbis included in the specification is not a statutory basis for the claim rejections. This is particularly true when the term describes a plurality of modes for utilizing an invention described in the specification as it is well established that *"the enablement requirement is met if the description enables any mode of making and using the claimed invention" (see Invitrogen Corp. v. Clontech Labs, Inc., 429 F.3d 1052, 1058 (Fed. Cir. 2005)*

where the Court referenced Engel Industries, Inc. v. Lockformer Co. 946 F.2d 1528 (Fed. Cir. 1991).

Reason #3 - The third reason that claim 64, claim 65, claim 67, claim 68, claim 69, claim 70 and claim 71 are patentable is that the assertions regarding the alleged lack of enablement in the written description are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of PTO findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that the arguments presented in the March 31, 2009 Office Action fail to meet both standards. As detailed under Reason #1 and Reason #2, these arguments fail under the substantial evidence standard because no evidence was presented about factors that are relevant to the statutory requirements for a written description rejection.

The Appellant respectfully submits that there are also several reasons that the written description rejections presented in the March 31, 2009 Office Action fail under the arbitrary and capricious standard, including:

a) it is well established that written descriptions are adequate if they teach those who understand the scientific and engineering principles applicable to the pertinent art how to make and use the invention without undue experimentation. Given this fact, there is no rational connection between the decision to reject claims on the basis of a written description rejection contained in the March 31, 2009 Office Action and the agency's prior fact-findings that have documented the fact that those authoring/signing the Office Action do not appear to have the capability of understanding the scientific and engineering principles applicable to the pertinent art" (see Issue 2, Reason #6); and

b) there is no rational connection between the agency's prior fact findings that have found that U.S. Patent 5,615,109 and U.S. Patent Application 10/166,758 both describe inventions for creating integrated databases and the rejection of the claims in the instant application for allegedly introducing new matter by incorporating the term "integrated database" in one or more claims (see related appeal for U.S. Patent Application 10/166,758 for details).

In short, because there is no rational connection between the agency's prior fact-findings and the claim rejections, the written description rejection for the listed claims would also fail under the arbitrary and capricious standard. The documented pattern of arbitrarily and capriciously incorporating non-statutory rejections of the Appellant's claims for allegedly lacking enablement

when the claims cover subject matter similar to the subject matter in claims contained in large company patents can also be observed in the appeals for applications 09/761,670, 10/743,417, 10/750,792 and 11/278,419.

Issue 7 – Whether claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and/or claim 71 are indefinite under 35 USC 112, second paragraph?

In the March 31, 2009 Office Action for the above referenced application claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and claim 71 are rejected under §112 second paragraph as being indefinite for using the words "identified data" in claim 55 and "output a database" in claim 70. Claim 56, claim 57, claim 58, claim 59, claim 60, claim 61 and claim 62 are rejected because they depend on claim 55. Claim 71 is rejected because it depends on claim 70. The Appellant will respectfully traverses the §112 second paragraph rejections of each claim in two ways. First, by noting that the Office Action has failed to establish a prima facie case that the claims do not meet the requirements of §112 second paragraph. Second, by noting that the claim rejections based on assertions of alleged indefiniteness are not in compliance with the Administrative Procedures Act and are therefore moot.

The first way the Appellant will traverse the 35 U.S.C. §112 second paragraph rejection of claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and claim 71 will be by noting that the arguments presented by the Examiner in the March 31, 2009 Office Action fail to establish the prima facie case required to sustain a §112 second paragraph rejection. *MPEP 2173.02 states that: definiteness of claim language must be analyzed, not in a vacuum, but in light of:*

(A) The content of the particular application disclosure;

(B) The teachings of the prior art; and

(C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent. See, e.g., Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1379, 55 USPQ2d 1279, 1283 (Fed. Cir. 2000). See also In re Larsen, No. 01-1092 (Fed. Cir. May 9, 2001). In the case of claim 55, claim 56, claim 57,

claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and claim 71 there are a number reasons Examiner has failed to establish the prima facie case that the specification does not meet the requirements of §112 second paragraph for every rejected claim. The reasons the Examiner has failed to establish a prima facie case of indefiniteness include:

Reason #1. The first reason the Examiner has failed to establish a prima facie case of indefiniteness is that <u>the conclusory statements used to support the claim rejections are incorrect</u>. The specification describes a process for developing an application database for an enterprise. The application database is an integrated database. The integrated, application database is the output of the process (see Evidence Appendix, pages 76 - 79). Furthermore, an amendment to claim 55 obviates the claim rejection for claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61 and claim 62.

Reason #2 The second reason the Examiner has failed to establish a prima facie case of indefiniteness is that the Examiner has failed to present any evidence that the claims are indefinite. The March 31, 2009 Office Action only contains conclusory statements that a) the meaning of "outputting a database" is unclear and b) that the meaning of identified data is unclear. The unsupported rejections also ignore the opinion of an individual with the requisite skill in the relevant arts (see Evidence Appendix, pages 75 - 78) that the meaning of "outputting a database" is clear.

Reason #3 The third reason the Examiner has failed to establish a prima facie case of indefiniteness is that the Examiner has failed to consider the claims as a whole. In particular, independent claims 70 describes an invention that uses a computer to implement a process for integrating data from a plurality of sources into an application database. It would be obvious to anyone of average skill in the relevant arts that the integrated database produced by this process is the output of this process. As a result, no one of average skill in the relevant arts would be confused about the meaning of the term "output a database" (see Evidence Appendix, pages 76 - 79).

Reason #4 The fourth reason the Examiner has failed to establish a prima facie case of indefiniteness is that the rejected claims do not meet any of the well established criteria for indefiniteness. Specifically, the rejected claims do not: (1) recite a means-plus-function limitation without disclosing corresponding structure in the specification; (2) include a numeric limitation without disclosing which of multiple methods of measuring that number should be used; (3) contain a term that is completely dependent on a person's subjective opinion, and/or (4) contain a term does not have proper antecedent basis where such basis is not otherwise present by

implication or the meaning is not reasonably ascertainable (Halliburton Energy Services, Inc. v. M-I LLC, 514 F.3d 1244, 1255,85 USPQ2d 1663 (Fed. Cir. 2008) and Halliburton, 514 F.3d at 1246, 85 USPQ2d at 1658 (Citing Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir, 2007).

Reason #5   The fifth reason the Examiner has failed to establish a prima facie case of indefiniteness is the Examiner has failed to consider the teachings of the prior art. The terms used in the rejected claims have well recognized meanings, which allow the reader to infer the meaning of the entire phrase with reasonable confidence. Bancorp Services, L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1372, 69 USPQ2d 1996, 1999-2000 (Fed. Cir. 2004).

Reason #6   As noted previously, another way the Appellant will respectfully traverse the §112 second paragraph rejections of claim 55, claim 56, claim 57, claim 58, claim 59, claim 60, claim 61, claim 62, claim 63, claim 70 and claim 71 is by noting that the assertions regarding the alleged indefiniteness of the claims are not in compliance with the requirements of the Administrative Procedures Act and are therefore moot. In Dickinson v. Zurko, 119 S. Ct. 1816, 50 USPQ2d 1930 (1999), the Supreme Court held that the appropriate standard of review of U.S.P.T.O. findings are the standards set forth in the Administrative Procedure Act ("APA") at 5 U.S.C. 706 (1994). The APA provides two standards for review – an arbitrary and capricious standard and a substantial evidence standard. The Appellant respectfully submits that discussion in the preceding paragraphs (Reason #1, #2, #3, #4 and #5) clearly shows that the Examiner has failed to provide even a scintilla of evidence to support the allegation that the claims do not meet the requirements of §112 second paragraph and that as a result has failed to meet the substantial evidence standard.

The Appellant respectfully submits that the rejections in the March 31, 2009 Office Action also fail to pass the arbitrary and capricious test because the U.S.P.T.O. fact-finding has produced substantial evidence that those authoring the claim rejections do not appear to have an ordinary or average level of skill in the pertinent arts required to author valid rejections for indefiniteness The documented pattern of arbitrarily and capriciously incorporating non-statutory rejections of the Appellant's claims for indefiniteness when the claims use the same terms used in allowed claims contained in large company patents can also be observed in the appeals for applications 09/761,670, 10/743,417, 10/750,792 and 11/278,419. The Appellant respectfully submits that the preceding discussion makes it clear that the March 31, 2009 Office Action has failed to meet the requirements of the APA and/or to establish a prima facie case that the rejected claims are indefinite.

8. Conclusion

The Appellant notes that with respect to the prosecution of the instant application, it appears that the U.S.P.T.O. has not fully complied with the requirements set forth in the APA, 35 U.S.C. 3 and 35 U.S.C. 131. A valid patent application rejection requires substantial evidence (Gartside, 203 F.3d at 1312). As described in the preceding section, the March 31, 2009 Office Action does not contain any evidence that would support the rejection of a single claim. However, related appeals and the March 31, 2009 Office Action for the instant application do provide substantial evidence that: those authoring/signing the Office Action do not appear to understand any of the scientific and/or engineering principles applicable to the pertinent art, those authoring the Office Action do not adhere to any of the well established requirements for authoring valid claim rejections, and that those authoring the Office Action appear to have based the claim rejections on the use of different legal standards than those used for the review and allowance of similar applications filed by larger companies.

For the reasons detailed above, the Appellant respectfully but forcefully contends that each claim is patentable. Therefore, reversal of all rejections is courteously solicited.

Respectfully submitted,
Asset Trust, Inc.

/B.J. Bennett/

B.J. Bennett, President
Dated: August 1, 2009

9. Claims Appendix

36. A computer implemented enterprise method, comprising:

preparing data representative of an enterprise for use in processing, and

transforming at least a portion of the data into a model of an enterprise market value by an element and category of value by completing a series of multivariate analyses that utilizes said data

where the categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof,

where the model of enterprise market value identifies and outputs a tangible contribution of each element of value to each category of value, and

where the elements of value are selected from the group consisting of alliances, brands, channels, customers, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

37. The method of claim 36 that further comprises completing activities selected from the group consisting of: identifying a set of changes that will optimize an enterprise market value, quantifying a future enterprise market value, creating a management report, valuing an enterprise market sentiment, calculating a real option discount rate, valuing a real option, and valuing a share of enterprise stock.

38. The method of claim 37 where a financial performance optimization further comprises identifying one or more changes that will optimize one or more aspects of financial performance where said aspects of financial performance are selected from the group consisting of revenue, expense, capital change, cash flow, real option value, future market value, market sentiment value, market value and combinations thereof.

39. The method of claim 36 wherein the method further comprises completing a series of multivariate analyses that are selected from the group consisting of identifying one or more previously unknown item performance indicators, discovering one or more previously unknown value drivers, identifying one or more previously unknown relationships between one or more value drivers, identifying one or more previously unknown relationships between one or more elements of value, quantifying one or more inter-relationships between value drivers, quantifying one or more impacts between elements of value, developing one or more composite variables,

developing one or more vectors, developing one or more causal element impact summaries, identifying a best fit combination of a predictive model algorithm and one or more element of value impact summaries for modeling enterprise market value and each of the components of value, determining a net element impact for each category of value, determining a relative strength of the elements of value between two or more enterprises, developing one or more real option discount rates, calculating one or more real option values, calculating an enterprise market sentiment value by element and combinations thereof.

40. The method of claim 39 wherein a predictive model algorithm is selected from the group consisting of neural network; classification and regression tree; generalized autoregressive conditional heteroskedasticity, regression; generalized additive; redundant regression network; rough-set analysis; Bayesian; multivariate adaptive regression spline and support vector method.

41. The method of claim 36 wherein data representative of an enterprise are obtained from systems selected from the group consisting of advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site systems, the Internet, external databases and combinations thereof.

42. The method of claim 36 wherein the method further comprises using one or more composite applications to complete the processing.

43. The method of claim 36 wherein a model of enterprise market value further comprises a combination of component and category of value models selected from the group consisting of up to three predictive component of value models, a real option discount rate model, a real option valuation model, a market sentiment model by element of value and combinations thereof.

44. The method of claim 36 where preparing transaction data for use in processing further comprises integrating said data in accordance with a common schema where the common schema is defined by a CORBA metadata or an xml metadata.

45. The method of claim 36 that further comprises identifying one or more changes that will optimize a future market value portion of said enterprise market value.

46. A program storage device readable by a computer, tangibly embodying a program of instructions executable by a computer to perform an element method, comprising:

    preparing data representative of an organization for use in processing,

    transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that identify and output a tangible value contribution of each of one or more elements of value to a current operation and a real option category of value,

    and

    reporting the value contribution of the elements of value using an electronic display or a paper document.

47. The program storage device of claim 46 where elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships, and combinations thereof.

48. The program storage device of claim 46 where a tangible value contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element of value impacts on other elements of value.

49. The program storage device of claim 46 where determining a value contribution for each of one or more elements of value to a real option category of value further comprises:

    identifying one or more elements of value that make a causal contribution to an organization market value,

    computing a difference between a real option value calculated using the company cost of capital as the discount rate and a value calculated using a real option discount rate

comprised of a base discount rate plus a risk factor for each element of value that makes a causal contribution to organization market value; and

assigning the value difference to the different elements of value based on their relative contribution to a calculated difference in the two discount rates.

50. The program storage device of claim 46 where the element of value contributions are identified by learning from the data.

51. The program storage device of claim 46 wherein the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that makes a causal contribution to an organization market value.

52. The program storage device of claim 46 where modeling enterprise financial performance further comprises:

    a) identifying one or more value drivers for each element of value,

    b) developing one or more element impact summaries from said value drivers for market value and each component of value,

    c) identifying a best fit combination of element impact summaries and predictive model algorithm for modeling market value and each component of value,

    d) determining a relative strength for each of the elements of value causal to market value change vis a vis competitors,

    e) calculating a real option discount rate using the relative element strength information for the elements that support the real option,

    f) calculating a real option value and identifying a contribution to real option value by element of value using said real option discount rate, and

    g) identifying a net element contribution to enterprise market value by category of value by combining the results from the processing completed in steps a through f.

53. The program storage device of claim 46 where the calculated value for each element of value further comprises a value for a point in time within a sequential series of points in time.

54. The program storage device of claim 46 wherein the net relative contribution for each element of value to each category of value further comprises a net causal contribution.

55. A computer implemented future market value method, comprising:

preparing data representative of an organization for use in processing, and

transforming at least a portion of the data into a causal model of each of one or more categories of an organization value that calculate and output a tangible value contribution of each of one or more elements of value to a future market value and each of the categories of organization value

where the categories of value comprise a current operation and a category of value selected from the group consisting of real options, market sentiment and combinations thereof, and

where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

56. The method of claim 55 wherein the discount rate for a real option valuation comprises a base discount rate plus a risk factor for each element of value that is causal to an organization market value.

57. The method of claim 55 that is enabled by the use of a flexible system architecture where said architecture further comprises data that has been integrated in accordance with a common xml schema and independent components of application software that can be combined to process said data as required to produce useful results.

58. The method of claim 55 where a net contribution for each of one or more elements of value to each of one or more categories of value further comprises a direct element contribution to a category of value net of any element impacts on other elements of value within said category of value.

59. The method of claim 55 where a causal model of an element of value contribution to an organization value further comprises a plurality of models selected from the group consisting of predictive component of value models, predictive market value models, relative element strength models, real option discount rate models, real option valuation models, market sentiment models and combinations thereof.

60. The method of claim 55 where a net contribution for each of one or more elements of value further comprises a direct contribution to a value of a category of value net of any impact on other elements of value.

61. The method of claim 55 where the one or more categories of value are selected from the group consisting of current operation, real option, market sentiment and combinations thereof.

62. The method of claim 55 where the future market value portion of organization market value further comprises a summation of values selected from the group consisting of the real option value, the portion of current operation value caused by elements of value, the portion of market sentiment value caused by elements of value and combinations thereof.

63. The method of claim 55 where the value driver changes that will optimize future market value are identified by algorithms selected from the group consisting of monte carlo algorithms, genetic algorithms, multi criteria optimization algorithms and combinations thereof.

64. A composite application method for data processing, comprising:
   using two or more independent components of application software to produce one or more useful results by transforming data representative of a physical object or substance into a predictive model that has a utility in managing or monitoring a real world activity of said object or substance
      where said data has been aggregated from two or more systems in accordance with a common model or schema defined by an xml metadata standard.

65. The method of claim 64 where the independent components of application software can be flexibly combined as required to support the development of one or more useful results.

67. The method of claim 64 where the independent components of application software complete processing selected from the group consisting of: analysis, attribute derivation, capitalization, causal analysis, classification, clustering, count linkages, data acquisition, data conversion, data storage, data transformation, element life estimation, indicator selection, induction, keyword counting, keyword match identification, locate linkages, relative strength determination, statistical learning, valuation and vector generation.

68. The method of claim 64 that produces useful results selected from the group consisting of: element contribution determination, element impact quantification, element valuation, enterprise financial performance analysis, enterprise financial performance optimization, enterprise financial performance simulation, future market value optimization, future market value quantification, management reporting, real option discount rate calculation, real option valuation, share price valuation, and sub-element clustering.

69. The method of claim 64 where two or more systems are selected from the group consisting of accounts receivable systems, accounts payable systems, advanced financial systems, basic financial systems, alliance management systems, brand management systems, customer relationship management systems, channel management systems, estimating systems, intellectual property management systems, process management systems, supply chain management systems, vendor management systems, operation management systems, sales management systems, human resource systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems, web site management systems, the Internet, external databases and combinations thereof.

70. A computer implemented data processing method, comprising:
Integrating, converting and storing data representative of an organization from a plurality of disparate sources in accordance with a common xml schema in order to transform said data into an integrated database, and
outputting said database
where a set of integration and conversion rules are established using a metadata and conversion rules window and saved in metadata mapping table.

71. The data processing method of claim 70 where each of one or more tables in an application database further comprise one axis that is defined by one or more time periods that require data and another axis that is defined by one or more data categories selected from the group consisting of components of value, sub components of value, known value drivers, elements of value, non-relevant attributes and combinations thereof.

72. An organization system, comprising a computer with a processor having circuitry to execute instructions; a storage device available to said processor with sequences of instructions stored

therein, which when executed cause the processor to complete a computer implemented market value accounting method, comprising:

preparing a plurality of data representative of an organization for use in processing,

transforming at least a portion of the data into a model of each of one or more categories of an organization value that identify and output a tangible contribution of each of one or more elements of value to the categories of organization value by completing a series of analyses where the categories of value further comprise a current operation category of value and a category of value selected from the group consisting of real option, market sentiment and combinations thereof,

using the tangible contribution for each element of value to identify a market value for each element of value, and

reporting the value of each element of value in a balance sheet format

where the reported value is a value for a specific point in time within a sequential series of points in time.

73. The system of claim 72, wherein the method further comprises including a value for one or more financial assets in a report with a balance sheet format.

74. The system of claim 72 that further comprises wherein the method further comprises:

tracking a change in a value of each of one or more elements of value over time, and

including the calculated changes in value of each element of value in an income statement or a cash flow statement.

75. The system of claim 72, wherein the elements of value are customers and elements of value selected from the group consisting of alliances, brands, channels, employees, intellectual property, partnerships, processes, vendors and combinations thereof.

10. Evidence Appendix

Page 63   Science News reference received June 29, 2009

Pages 64 – 67   Declaration for 10/743,616 reviewed October 17, 2008

Pages 68 – 72   Declaration for 10/287,586 received June 1, 2009

Pages 73 – 75   Declaration for 10/743,616 received October 17, 2008

Pages 76 – 79   Declaration for 09/764,068 received May 13, 2009

Pages 80 – 81   PhysOrg reference reviewed November 23, 2007

GERONTOLOGY

Unlearning Is Problem

Jobs that require new techniques become progressively harder for those over 30 to learn to do satisfactorily, suggesting that tasks requiring speed and unlearning are unsuitable.

➤ A BIGGER PROBLEM for older people who want to go on working is not learning new things so much as unlearning things that they have learned in the past.

Studies showing this have been made by Dr. Jack Botwinick, psychologist of the Clinical Center, National Institutes of Health, Bethesda, Md.

If what you have been doing is unlike what you are going to do in the future, you will have to unlearn a good deal of what you have been doing, Dr. Botwinick pointed out. This problem of unlearning, which is the biggest problem of learning new things, is true even at 30 and more so at ages 40, 50, 60 and on into the higher ages.

A person past 60 can do well on his own until he gets to a late age, but if there is increasing management policy for automation, for example, requiring the man to learn something new for his job, unlearning what he was doing very well may be the biggest problem.

A more familiar example that Dr. Botwinick gave was that of an older person learning to drive a non-gearshift automobile. He can do it, but it takes longer for the older person to stop reaching for the clutch than for a younger person learning the same thing.

A process of adaptation is related to the process of learning and unlearning. What has been adequate and appropriate at one time, but is no longer so, must be eliminated. The older the person, the harder it is to eliminate inappropriate or inadequate behavior, because, again, it involves an unlearning process.

Implications of the situation's social aspects are that older people should be able to do well if they continue doing what they have been doing, in the way of a job or other activities.

This is particularly true if the older person is a superior person, and if what he does involves verbal material.

For example, a person who works in teaching, unless he has to learn new processes and new methods of teaching, should be able to go on doing a good job as he gets older, whereas a person whose work involves manual or other kinds of physical activity may have more difficulty as he gets older.

Every living creature gets slower as he gets older, man is not the only animal that slows down with age, Dr. Botwinick said.

The group studying the aging process at the Clinical Center think the slowing is not only a question of muscles and a nerve reaction, but also a matter of the thinking process, as well as of complex behavior and skill.

This means, Dr. Botwinick said, that jobs requiring speed and unlearning are not suitable for older persons, whereas jobs requiring accuracy and recurring repetitive processes are work at which older people will do relatively well.

Science News Letter, February 4, 1956

TECHNOLOGY

New Transistor Operates At Very High Frequencies

➤ A NEW TRANSISTOR that operates at frequencies three times higher than others recently announced has been developed.

Because of its very high frequency characteristics, the transistor is expected to be widely used in guided missiles and electronic "brains."

Heart of the tiny amplifying device is the center layer, or "base," which is only 50-millionths of an inch thick.

It is made at Bell Telephone Laboratories in New York by a new fabricating method that uses the process of diffusion to control minute amounts of impurities sandwiched onto the base layer.

The narrower the base layer can be made, the higher the frequency at which the transistor will operate.

Transistors are widely used to replace vacuum tubes as low-frequency amplifiers, and the newly developed device broadens their field of application to include both black and white and color television transmission as well as missiles and computers.

Experimental units of the new device have amplified by 100 to one currents across a band 20,000,000 cycles wide. Either amplification or the number of communication channels can be made three times that of other transistors. When the frequency band is cut in half, power amplification is doubled. Available transistors have a frequency cut-off of up to ten megacycles, while the new ones work to 600 megacycles.

C. A. Lee of Bell Laboratories perfected the techniques of sandwiching with germanium. C. S. Fuller and M. Tanenbaum have applied the diffusion technique in making the new transistor from silicon. Dr. William Shockley and George C. Dacey directed the work leading to the development.

Science News Letter, February 4, 1956
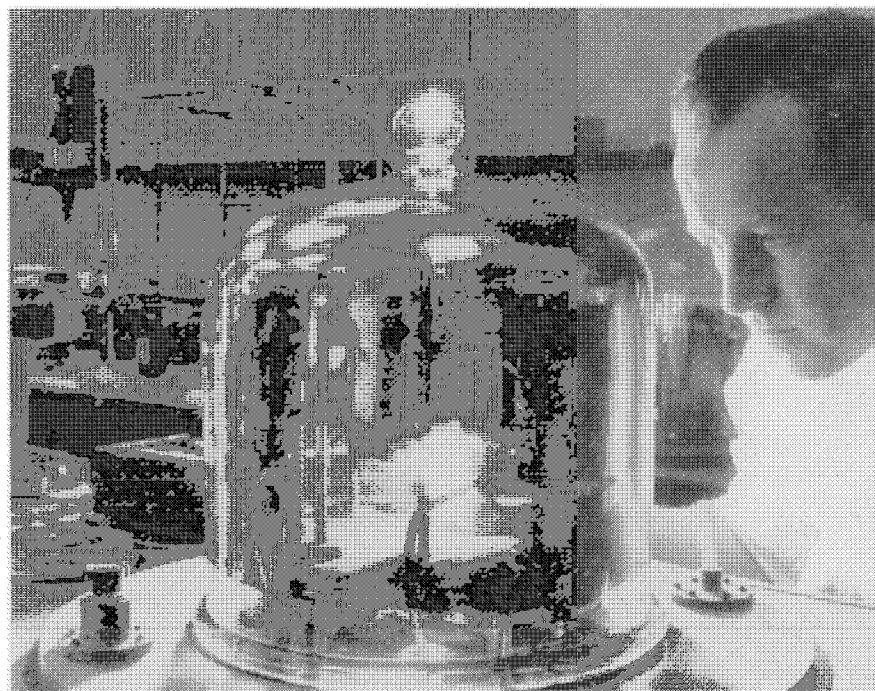
MAKING TRANSISTOR BY DIFFUSION—Electrical contacts are being made to germanium by vaporizing a metal onto the surface, using the process of diffusion to control the amount of impurities. The germanium bar is under vacuum in the jar while a Bell Telephone Laboratories technician performs one of the operations in making the new transistor, which shows great promise for use at very high frequencies.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 10/743,616

Applicant: Jeff S. Eder

Filed: March 16, 2002

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.: AR - 61

Customer No: 53787

DECLARATION UNDER RULE 132

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 26 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 16 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Kantrak, Inc. I previously met the inventor, who is now the President of Kantrak, Inc. briefly on October 16, 2007.

On October 25, 2007, I was given a copy of U.S. Patent Application 10/743,616 entitled "A performance management platform" filed in the United States Patent Office on March 16, 2002. Until that time I had not read the patent application. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On September 29, 2008 I was given a copy of "the 1986-1988 Stock Market Investor Sentiment or Fundamentals", by Michael N. Baur, Socorro Quintero and Eric Stevensi published in Managerial and Decision Economics, Vol. 17, No. 3 (May - Jun., 1996). Until that time I had not read the article or discussed it with anyone. However, I have read many articles on the subject of market value and market sentiment. I have a strong understanding of the concepts of market value and market sentiment and have been teaching these concepts for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the article by Baur et al. (hereinafter, the Baur article) has no relevance to the market sentiment calculation and analysis described in patent application 10/743,616. There are several reasons for this.

1. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm. The Baur article describes an attempt to determine if investor sentiment related to the market as a whole had an effect on changes in prices for the S&P 500 as a whole during the period from 1986-1988;

2. Patent application 10/743,616 defines market sentiment for a single firm as the difference between the market value of firm's equity and debt and the value of the firm's current operation, real options, excess financial assets and derivatives. The Baur article does not analyze the difference the market value of S&P 500's equity and debt

and the value of the S&P 500's current operation, real options, excess financial assets and derivatives as it only attempts to analyze changes in prices;

3. Patent application 10/743,616 teaches the analysis of the market sentiment level calculated for a firm using the method described in item 2 in order to identify the elements of value and/or external factors that contribute to the calculated levels. The Baur article does not teach or suggest anything about identifying the elements of value and/or external factors that contribute to market sentiment or investor sentiment;

4. Patent application 10/743,616 describes a method for calculating and analyzing market sentiment for a single firm at a specific point in time. The Baur article describes an attempt to determine if changes in investor sentiment related to the market as a whole affects weekly changes in prices for the S&P 500 as a whole over a period of several years;

5. The Baur article cannot be used to make any inferences about investor sentiment (or market sentiment) at the firm level because increases in investor sentiment for some firms in the S&P 500 could offset decreases in investor sentiment for other firms within the S&P 500 over the time period being analyzed;

6. Patent application 10/743,616 does not teach or suggest anything about identifying a proxy for market sentiment for the market as a whole. The Baur article relies on an assumption that a measure of the change in the discount percentage on closed end funds is a proxy for investor sentiment related to the market as a whole. The Baur article also acknowledges that changes in closed end fund discounts may not be the correct proxy for measuring general investor sentiment;

7. The only conclusion that can reasonably be drawn from the Baur article is that the assumed proxy for general investor sentiment (described in item 6) did not have a significant statistical relationship to the observed price changes for the S&P 500 between 1986 and 1988.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.
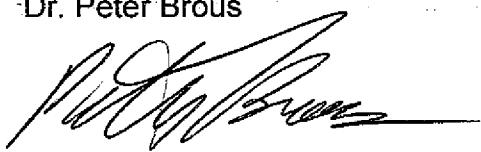
Dr. Peter Brous

Date: October 17, 2008

Serial No.:   10/287,586

Applicant: Jeff S. Eder

Filed: November 5, 2002

Examiner: Yehdegga Retta

Art Unit: 3693

Docket No.:   AR - 38

Customer No: 53787

DECLARATION UNDER RULE 132

I, Rick Rauenzahn, do hereby declare and say:

My home address is 529 Calle don Leandro, Espanola, New Mexico. I have a B.S. degree in chemical engineering from Lehigh University, an S.M. degree in chemical engineering from The Massachusetts Institute of Technology and a Ph.D. in chemical engineering from The Massachusetts Institute of Technology. I have worked in the mathematical modeling field for 26 years concentrating in the disciplines of fluid mechanics, turbulence modeling, numerical methods for partial differential equations, radiation hydrodynamics, and strength of materials. I also have extensive knowledge of computer system administration, particularly for Windows-based, Linux, and UNIX systems. I have been employed by Los Alamos National Laboratory and Molten Metal Technologies for the past 25 years.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. or with its licensee Kantrak, Inc. As described in prior declarations I have met the inventor who is the President of Kantrak.

On November 26, 2008 I was given a copy of "How to sort out the premium drivers of post-deal value" from Mergers and Acquisitions from July/August 1993, Vol. 28, Iss.1; pg. 33, 5 pgs by Daniel W. Bielinski (hereinafter, Bielinski), 'Neural Networks Enter the World of Management Accounting'"; Management Accounting; Montvale, NJ; May 1995, 5 pages, by Carol Brown, James Coakley, & Mary Ellen Phillips (hereinafter Brown), pages 56, 172 and 173 from Creating shareholder value; by Alfred Rappaport, The Free Press, U.S.A., Declaration Under Rule 132 for Application 10/287,586, dated July 21, 2008 by Dr. Peter Brous and a copy of application 10/287,586. On May 12, 2009 I was given a copy of "What is Value Based Management?" by Timothy Koller. Until that time I had not read the articles, the book pages, the declaration or the application although I have read other applications that are similar including application 09/761,670, application 09/688,983, application 10/287,586 and application 10/821,504. Application 10/298,021 is a continuation of application 09/938,874. I am totally familiar with the language of the claims and conversant with the scope thereof. I completely understand the invention as claimed.

It is my understanding that the Examiner for this application has proposed combining the teachings of Bielinski together with the teachings of Brown to replicate the neural network models developed by the above referenced application. Based on my experience and training in the field of mathematical modeling and electronic data processing, I have concluded that the proposed combination of Bielinski and Brown would destroy the ability of the Value Based Management method taught by Bielinski to function.

Understanding why the functionality of the system described by Bielinski would be destroyed requires some background. Neural networks complete their processing by using a squashing function (usually a sigmoid) that combines data inputs in a linear or non-linear fashion as best fits the data before producing an output. Squashing functions typically have output values between 0 and 1. For prediction models the output node is sometimes given a linear activation function to provide forecasts that are not limited to the zero to one range. The tree based analysis of cash flow taught by Bielinski relies on a finite number of inputs to each node of a tree. The inputs to each node are mathematically combined to produce a value that is passed on up the tree for

mathematical combination in another node (Figure 2 in Bielinski confirms the linear nature of the model). For example, Bielinski discusses breaking the operating profit margin value driver into revenue minus cost of goods sold where the cost of goods sold is further broken down into materials, human resources, technology/capital and other (see diagram below). Bielinski labels these latter four cost categories operational value drivers.

```
                                    Value
                   |_____|_____
                   |                                |
             Cost of Capital                    Cash Flow
                            _____|_____
                            |                                            |
                   Operating Profit Margin                        Capital Investment
           _____|_____
           |                                 |
        Revenue                      Cost of Goods Sold
                         _____|_____
                         |            |            |            |
                     Materials  Human Resources  Technology   Other
```
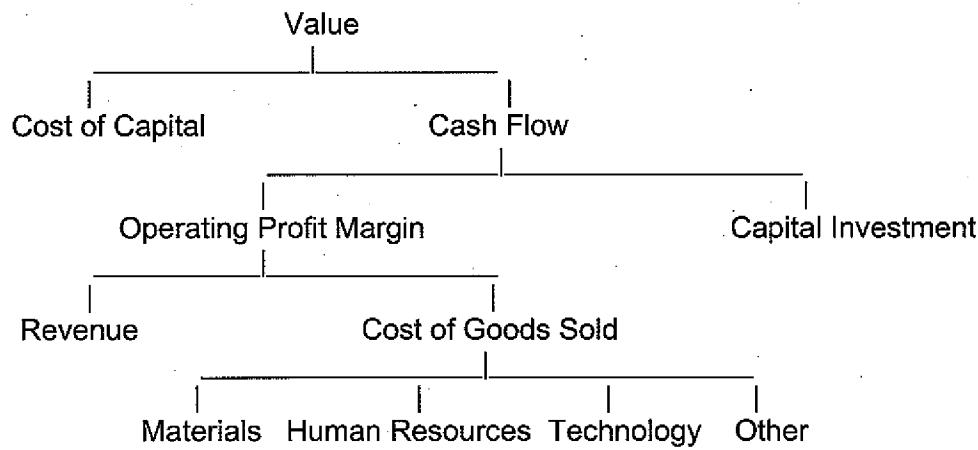
Replacing all or part of the tree with a neural network would destroy the ability of the tree to complete the processing required for the VBM analysis in a number of ways. Replacing part of the tree shown above with a neural network would destroy the ability to complete required processing. The reason for this is that the output value from a neural network (generally between 0 and 1) could not be used to produce the proper input value for the node at the next level as required to complete the mathematical processing of the tree. For example a neural network node could not subtract cost of goods sold from revenue to generate operating profit margin. Replacing the entire tree shown above with a neural network would exacerbate this problem as each intermediate node of the tree would receive only inputs between zero and one that could not combine to produce the required output values for use as inputs to higher level nodes. If the cash flow tree shown above was entirely replaced by a neural network (as claimed) where lower level nodes became nodes in hidden layers within the network, then the same problem with output values would prevent proper functioning at higher level nodes and additional problems would be created. One of these additional problems would be that the user would lose his or her ability to select the inputs to a

node because neural networks determine the combination of inputs that are best suited to produce output values for the next layer in the network during training. The user would also lose the ability to determine the number of nodes and their relationship for similar reasons. In all cases discussed above, the assumption of linearity that is implicit in the use of a tree could also be violated by substituting a neural network for any part of the tree.

Because the lowest level of the Value Based Management analysis method taught by Bielinski contains sub components of value such as production labor and material cost, the Bielinski model also teaches away from the modeling method disclosed in application 10/287,586 which has value drivers for elements of value at the lowest level, elements of value at the second level and subcomponents of value at the third level.

Another way in which Bielinksi teaches away from the method disclosed in application 10/287,586 and all other Asset Reliance applications I have reviewed is that Bielinski uses a single tree for both calculating the actual cash flow and identifying the accounts where the revenue, expense and capital charges are incurred.

The Asset Reliance applications I have reviewed create a series of predictive models (in the case of 10/287,586 the predictive model is a neural network model) that use element of value impact summaries as inputs in order to identify the contribution of different elements of value to each of the components of value and to other categories or segments of value (i.e. investments, market sentiment, derivatives). The percentages identified by the predictive model are then combined with the value of the component, category or segment value to calculate a value impact for each element of value.

Modifying Bielinski to use element impact summaries in place of account data would destroy the ability of the Bielinski invention to function as would replacing the tree with a predictive model.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these

statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

Rick M. Rauenzahn

Date: May 16, 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. :	10/743,616
Applicant :	Jeff S. Eder
Filed :	22 December 2003
Art Unit ::	3692
Examiner :	Jennifer Liversedge
Docket No. :	AR - 61
Customer No. :	53787

DECLARATION UNDER RULE 132

I, Dr. Peter Brous, do hereby declare and say:

My home address is 17221 NE 8th Street, Bellevue, WA 98008. I have a B.S. degree in Finance from the University of Connecticut and a PhD in Finance from the University of Oregon.

I have worked in the finance field for 25 years, concentrating in the areas of corporate performance measures, business valuation, capital budgeting, and real option analysis. I have been a professor of finance at Albers School of Business and Economics at Seattle University for 15 years and was recently honored to hold the Dr. Khalil Dibee Endowed Chair.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc or its licensee Knacta, Inc. I met the inventor, the President of Knacta, Inc.,

for the first time on October 16, 2007. I understand that Knacta, Inc. has a license to the intellectual property associated with this application. I have had extremeley brief discussion of this patent application and the article cited below with the inventor.

On October 25, 2007 I was given a copy of "How to sort out the premium drivers of post deal value", by Daniel Bielinski published in Mergers and Acquisitions in July of 1993. Until that time I had not read the article. However, I have read many articles on the subject of Value Based Management. I have a strong understanding of the concept and practice of Value Based Management and have been teaching this concept for over 10 years. I have studied the entire article and I am totally familiar with the language of the article with the scope thereof.

Based on my experience and education in the field of finance, I have concluded that the the Bielinski article and Value Based Management does not inherently describe or enable: the development of a computational model of enterprise market value by element of value and segment of value where the elements of value are selected from the group consisting of alliances, brands, channels, customers, customer relationships, employees, employee relationships, intellectual capital, intellectual property, partnerships, processes, production equipment, vendors and vendor relationships and the segments of value are selected from the group consisting of market sentiment, real option, derivative, excess financial asset.

There are several reasons for this:

1. As stated in the article VBM is similar to SVA. One of the ways it is similar is that it focuses on "value drivers" such as profit margin and growth instead of intangible assets as part of a tree based analysis of cash flow. Unlike SVA, VBM includes operational value drivers that drive the value drivers. However, these are generally not intangible elements of value. For example, Bielinski provides an example of breaking down profit margin by looking more closely at the cost of materials;

2. VBM is also similar to SVA in that it relies on the efficient market theory and this precludes the analysis of market sentiment;

3. SVA and VBM are tools that focus on the standard valuation model, a discounted cash flow model, that does not even consider the value associated with flexibility or decision making that is done sequentially and conditionally based on the arrival of new information. The valuation of this flexibility is the basis for valuation using real option analysis; and

4. Neither VBM or SVA address the valuation of derivatives.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,
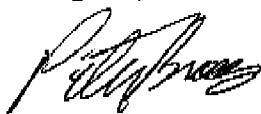
Dr. Peter Brous
Date: 10/31/2007

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:   09/764,068

Applicant: Jeff S. Eder

Filed: January 19, 2001

Examiner: Jennifer Liversedge

Art Unit: 3692

Docket No.:   AR - 19

Customer No: 53787

DECLARATION UNDER RULE 132

I, Gregory Cusanza, do hereby declare and say: my home address is 8604 233rd Place NE, Redmond, WA 98053 and I have a B.S. degree in computer science from Cal Poly San Luis Obispo.

I have worked in the data processing field for 16 years, concentrating in the disciplines of data storage, data conversion and enterprise processing. I also have extensive knowledge of computer system administration, particularly for Windows, Linux, and Unix systems. I have been employed by a corporation that was recently purchased by EMC for 12 years, Knacta for 1.5 years and Kantrak, Inc. for the seven months. I own 5% of the issued common stock in Kantrak, Inc.

I further declare that I do not have any direct affiliation with the application owner, Asset Reliance, Inc. I first met the inventor in April of 2004. 1 joined Kantrak, a company run by the inventor in February 2008. Knacta was also run by the inventor. Kantrak has a license to the intellectual property associated with this application.

On August 30, 2007, I was given a copy of U.S. Patent Application 10/441,385 filed in the United States Patent Office on May 20, 2003. U.S. Patent Application 09/764,068 is the parent of application 10/645,009 and as such has the same specification and drawings. I have studied the entire specification in order to closely analyze the claims and drawings. I am familiar with the language of the claims and conversant with the scope thereof. I understand the invention as claimed.

On October 2, 2008 I was given a copy of U.S. Patent 6,549,922 by Srivastava et al (hereinafter, Srivastava) that is entitled "System for collecting, transforming and managing media metadata" and a copy of U.S. Patent 7,249,328 by Russell T. Davis (hereinafter, Davis) that is entitled "Tree view for reusable data markup language". Until that time I had not read either of these patents and I have not discussed them with anyone.

Based on my experience and education in the field of data storage, data conversion and enterprise processing, I have concluded that:

1. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database and the database can properly be called an integrated database;

2. U.S. Patent Application 09/764,068 describes a process for integrating data into an application database. It would be obvious to anyone of average skill in the art that the integrated database produced by this process is the output of this process; and

3. U.S. Patent Application 09/764,068 describes a process for transforming data from disparate systems into an integrated application database and anyone of average skill in the art of data processing who read the specification would fully understand the scope of the activities associated with the transformation.

I have also attached a drawing that graphically illustrates the difference between the data integration invention described in U.S. Patent Application 09/764,068 and the Davis invention.

Finally, I will reiterate that Srivastava uses the term "metadata mapping" to describe the process of matching a summary description for a file derived from metadata for the file to a schema. 09/764,068 uses the term "metadata mapping" to describe the process of mapping from source database metadata to application database metadata. In other words, Srivastava teaches away from the meaning of metadata mapping disclosed in 09/764,068.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed,

4.28 - 2009

Gregory Cusanza
Date: April 28, 2009

Maps and converts source data to an integrated database in accordance with a common schema

Basic Financial System Database — 5

Operation Management System Database — 10

09/940,460

Integrated Application Database — 50
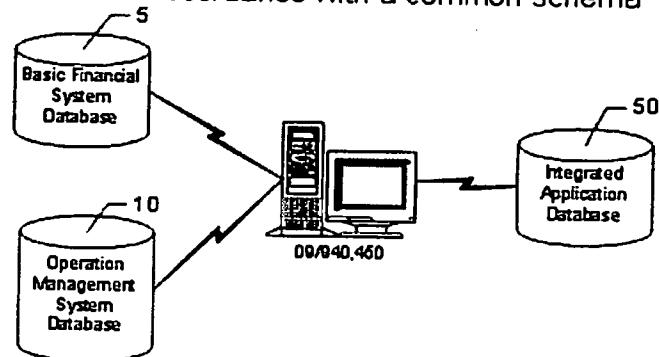
Combines source data and conversion information in an application to produce a graph/presentation

Browser/ Spreadsheet

RML dtd conversion data

Davis

Basic Financial System Database — 5

Operation Management System Database — 10

PHYSORG.COM

SCIENCE : PHYSICS : TECH : NANO : NEWS
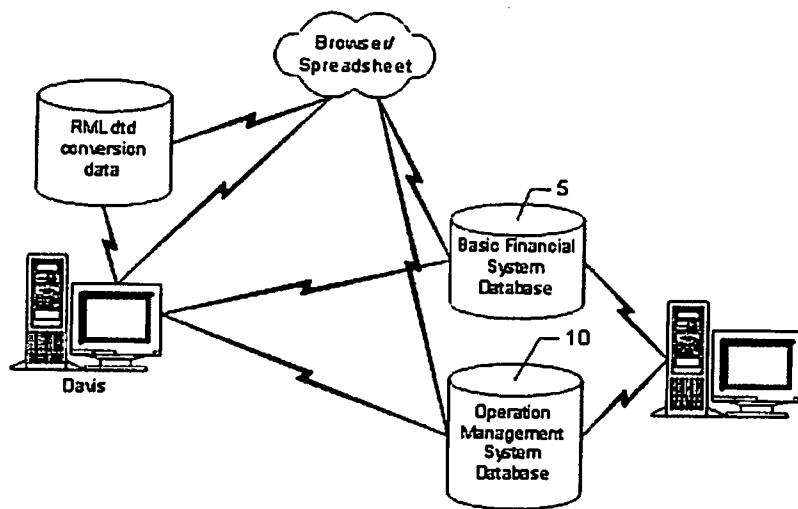
How much information is too much information?

Has anyone ever told you during a conversation: "Stop, that`s too much information?" Well University of Queensland psychologists have discovered just how much too much information actually is.
Emeritus Professor Graeme Halford and his colleagues from UQ`s School of Psychology have discovered most humans cannot represent relations between more than four variables.

Their study, How Many Variables Can Humans Process?, pushed a group of 30 academics to their mental limits.

Participants were given incomplete descriptions of interactions between variables, with an accompanying set of bar graphs representing the interactions. They were then required to complete the descriptions so that they correctly described the graphs.

"At the level of the four-way interactions, participants made comments such as "Everything fell apart and I had to go back"," Professor Halford said.

"Only chance levels of performance were obtained for five-way interactions."

The results have implications for the design of high-stress work environments such as the coordination of fire-fighting operations.

"If the number of variables to be considered exceeds human processing capacity then the worker will drop his or her mental bundle and become unable to proceed," Professor Halford said.

"More seriously, the worker may revert to a simplified version of the task that does not take all aspects into account and therefore may make the wrong decision.

"This type of problem is particularly acute in tasks that have to be performed under time pressure or where unusual combinations of circumstances are likely to arise.

"Modern high-technology industries produce many situations of this kind because of the number of variables that have to be taken into account in decision making."

Professor Halford`s team included Dr Rosemary Baker and Dr Julie McCredden from UQ`s School of Psychology and Professor John D Bain from Griffith University.

Their results showed that as the complexity of the interaction increased,

performance and confidence levels dropped significantly.

"While all levels of complexity are logically possible, the evidence suggests that they are not cognitively manageable," Professor Halford said.

Professor Halford said complex ideas were conceptual structures built in the temporary working area of the mind called the working memory. His findings are the outcome of a decade of research, investigating tasks that push cognitive processing to the limits.

"Four way interactions require humans to represent relations between relations between relations between pairs of bars; which can be reframed mathematically as a four-dimensional task," he said.

"We found that four dimensions are the most that humans can conceive of.

"Therefore, if the world was five-dimensional, rather than three, we would not be able to understand it."

Source: The University of Queensland

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11. Related Proceedings Appendix - Attached opinion appears to be based largely on an assumption that VBM is different than SVA in a number of areas where they are in fact the same (see Evidence Appendix, pages 67 - 74). Opinion also appears to contain a number of clear errors because:

1) The cited documents failed to make the invention as a whole obvious by teaching away from the claimed methods. Bielinski teaches: efficient market in place of an inefficient market, a tree based analysis in place of a network analysis and three determinants of market value (cash flow, cash flow risk and growth) in place of the elements of value as determinants of value. Brown teaches: scoring in place of regression and that 40 external factors determine market value in place of elements of value as determinants of value.

2) The cited combination failed to teach one or more limitation for every claim.

3) Modifying the cited documents to replicate the claimed functionality would require changes in the principles of operation for the cited inventions and destroy their ability to function. Bielinski would have to change from a tree to a network and it is well known that substituting a neural network sigmoid in place of the tree node would destroy the ability of the tree to function. Brown would have to change to using elements of value as determinants of value and use regression in place of scoring.

4) The cited documents teach away from their own combination. Bielinski specifically prohibits the use of projections while the cited portion of Brown teaches a method with only one function: projecting changes in stock prices.

5) Bielinski specifically states that the disclosed VBM method follows the principles of Shareholder Value Analysis (SVA). One of the well known principles of SVA is the efficient market theory. In spite of these facts, the BPAI said there was no evidence that Bielinski taught the efficient market theory.

6) Bielinski specifically states that the disclosed VBM method follows the principles of SVA. One of the well known principles of SVA is the tree based analysis of cash flow. In spite of these facts, the BPAI said there was no evidence that Bielinski taught the tree based analysis of cash flow.

7) Bielinski specifically states that the disclosed VBM method follows the principles of SVA. One of the well known principles of SVA is that there are 3 determinants of market value. In spite of these facts, the BPAI said there was no evidence that Bielinski taught that there were 3 determinants of market value.

1   UNITED STATES PATENT AND TRADEMARK OFFICE

2   _____

3

4   BEFORE THE BOARD OF PATENT APPEALS

5   AND INTERFERENCES

6   _____

7

8   *Ex parte* JEFFREY SCOTT EDER

9   _____

10

11   Appeal 2007-2745

12   Application 09/761,671

13   Technology Center 3600

14   _____

15

16   Decided: August 29, 2007

17   _____

18

19   Before TERRY J. OWENS, HUBERT C. LORIN, and ANTON W. FETTING,

20   *Administrative Patent Judges.*

21   FETTING, *Administrative Patent Judge.*

22   DECISION ON APPEAL

23

24

25

26   STATEMENT OF CASE

27   Jeffrey Scott Eder (Appellant) seeks review under 35 U.S.C. § 134 of a Final

28   rejection of claims 69-103, the only claims pending in the application on appeal.

29   We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6.

30

31   We AFFIRM.

32

1   The Appellant invented a way to calculate and display a forecast of the impact

2   of user-specified or system generated changes in business value drivers on the

3   other value drivers, the elements, the components, the financial performance and

4   the long term value of a commercial enterprise that utilizes the information from a

5   detailed valuation of the enterprise (Specification 9:2-7).

6   An understanding of the invention can be derived from a reading of exemplary

7   claim 69, which is reproduced below [bracketed matter and some paragraphing

8   added].

9   69. A current operation modeling method, comprising:

10   [1]

11   [a] integrating transaction data

12   [i] for a commercial enterprise

13   [ii] in accordance with a common data dictionary;

14   [b] using a neural network model

15   [i] to identify one or more value driver candidates

16   [ii] for each of one or more elements of value from said data,

17   [c] using an induction model

18   [i] to identify one or more value drivers from said candidates

19   and

20   [ii] define a contribution summary

21   [1] for each element of value

22   [2] for each of one or more aspects of a current operation

23   financial performance

24   [3] using said value drivers, and

25   [d] creating a plurality of network models

26   [i] that connect the elements of value

27   [ii] to aspects of current operation financial performance

1   [iii] using said contribution summaries

2   [2]

3   [a] where the elements of value are selected from the group consisting

4   of

5   [i] brands,

6   [ii] customers,

7   [iii] employees,

8   [iv] intellectual capital,

9   [v] partners,

10   [vi] vendors,

11   [vii] vendor relationships and

12   [viii] combinations thereof,

13   [b] where the induction models are selected from the group consisting

14   of

15   [i] lagrange,

16   [ii] path analysis and

17   [iii] entropy minimization,

18   [c] where the network models support automated analysis through

19   computational techniques and

20   [d] where the aspects of current operation financial performance are

21   selected from the group consisting of

22   [i] revenue,

23   [ii] expense,

24   [iii] capital change,

25   [iv] cash flow,

26   [v] future value,

27   [vi] value and

28   [vii] combinations thereof.

29

1

2   This appeal arises from the Examiner's Final Rejection, mailed June 13, 2006.

3   The Appellant filed an Appeal Brief in support of the appeal on October 3, 2006.

4   An Examiner's Answer to the Appeal Brief was mailed on January 9, 2007. A

5   Reply Brief was filed on January 27, 2007.

6   PRIOR ART

7   The Examiner relies upon the following prior art:

8   Daniel W. Bielinski, *How to sort out the premium drivers of post-deal value*,

9   Mergers and Acquisitions, Jul/Aug 1993, Vol. 28, Iss. 1, pg. 33, 5 pgs. (Bielinski)

10 Carol E. Brown, James Coakley, and Mary Ellen Phillips, *Neural networks enter*

11 *the world of management accounting*, Management Accounting, May 1995, Vol.

12 76, Iss. 11, p. 51, 5 pgs. (Brown)

13 The Appellant relies upon the following prior art, already of record:

14 Alfred Rappaport, *Creating Shareholder Value*, A Guide for Managers and

15 Investors, pp. 39, 70, 171, and 172, ISBN 0-684-84410-9, 1998 (Rappaport)

16   REJECTION

17 Claims 69-103 stand rejected under 35 U.S.C. § 103(a) as unpatentable over

18 Bielinski and Brown.

19   ISSUES

20 Thus, the issue pertinent to this appeal is whether the Appellant has sustained

21 its burden of showing that the Examiner erred in rejecting claims 69-103 under

22 35 U.S.C. § 103(a) as unpatentable over Bielinski and Brown.

1   FACTS PERTINENT TO THE ISSUES

2   The following enumerated Findings of Fact (FF) are believed to be supported

3   by a preponderance of the evidence.

4   *Claim Construction*

5   01.   Entropy minimization is an induction algorithm that, starting with

6   nothing, adds variable to composite variable formula as long as they

7   increase the explainability [sic] of result (Specification, 47:Table 23).

8   02.   LaGrange is an induction algorithm that is designed to identify the

9   behavior of dynamic systems and uses linear regression of the time

10   derivatives of the system variables (Specification, 47:Table 23).

11   03.   Path Analysis is an induction algorithm that is essentially equivalent

12   to multiple linear regression that finds the least squares rule for more

13   than one predictor variable (Specification, 47:Table 23).

14   *Bielinski*

15   04.   Bielinski is directed towards describing how Value Based

16   Management (VBM), an advancement in discounted cash flow

17   modeling, centers on what specific steps can be taken operationally and

18   strategically to add value to a target organization (Bielinski, 1:Abstract).

19   05.   Bielinski describes how sensitivity analysis of past results offers clues

20   to what can be done in the future and which value drivers should receive

21   the most attention to achieve optimal rewards. The VBM technique

22   allows the analyst to figure key decision making trade-offs, since

23   attention to one driver may generate negative effects on others or 2 or

1   more drivers may have to be varied in concert to produce the best results

2   (Bielinski, 1:Abstract).

3   06.   Bielinski describes Value-Based Management (VBM), which keys on

4   a target's historical operations rather than future projections. VBM also

5   can calculate the results of trade-offs when decision makers must choose

6   between a series of factors that can be changed to enhance post

7   acquisition value (Bielinski, 1:Bottom ¶ - 2:Top line).

8   07.   Bielinski describes the best-known valuation tool designed to

9   facilitate value creation and cash flow enhancement as Shareholder

10   Value Analysis (SVA), introduced in the 1980s by Prof. Alfred

11   Rappaport of Northwestern University (Bielinski, 2:First full ¶).

12   08.   SVA may be defined as a two-step process. First, a discounted cash

13   flow business valuation is performed. A projection of future cash flow

14   (including a residual) is developed and discounted at an appropriate rate,

15   usually the cost of capital, to arrive at an indicated value. Second, key

16   factors (or value drivers), such as growth, profit margins, etc., are varied

17   systematically to test the sensitivity of the indicated business value to

18   each driver. Standard SVA sensitivity analysis changes each value driver

19   plus or minus 1%, although analysts now often use "relevant ranges" and

20   different percentages for upside and downside swings to reflect

21   prevailing business realities (Bielinski, 2:First full ¶).

22   09.   SVA has limitations often magnified into constraints that necessitate

23   modifying standard SVA analysis. Thus, Rappaport describes and

24   distinguishes VBM, a first cousin to SVA, which has resulted from these

25   modifications. Bielinski provides an abbreviated overview of VBM and

1   describes how it differs from the traditional SVA framework (Bielinski,

2   2:Second and third full ¶'s).

3   10.   Rather than use projections of future cash flow like SVA, the VBM

4   framework utilizes historical cash flow. Five years of historical cash

5   flow are added up to arrive at a cumulative baseline cash flow number.

6   That is in contrast to SVA's method of discounting future cash flows to

7   reach an indicated value. Instead of testing the sensitivity of a value

8   based on a projection, VBM tests the sensitivity of the historical cash

9   flow. VBM tells the executive how much more or less cash flow would

10   be in the bank today if certain events had occurred differently or if the

11   company had operated differently in the past five years (Bielinski,

12   2:Fifth and sixth full ¶'s).

13   11.   The use of actual historical data, rather than projections, has proven

14   useful in testing the impact of alternative scenarios against the reality of

15   actual events. It also has served as a catalyst to identify and implement

16   actions that generate improvements. As long as a company's

17   fundamental structure does not change going forward, the results provide

18   meaningful insight regarding the probable outcomes of future strategic

19   action, to the extent that risk is not increased, an executive may

20   reasonably assume that an increase from historical cash flow trends

21   likely would translate into enhanced value (Bielinski, 2:Seventh full ¶).

22   12.   VBM utilizes drivers that are more directly linked to operations. For

23   example, rather than use operating profit margin as a broad value driver,

24   a VBM analysis on a manufacturer would include a breakdown of cost

25   of goods sold by key components (Bielinski, 2:Eighth full ¶).

13.   Bielinski provides an example of a mix for VRM analysis including materials, human resources, technology and capital, and other costs of goods sold as value drivers (Bielinski, 2:Bottom five full ¶'s).

14.   VBM essentially utilizes SVA principles but advances the basic techniques by incorporating historical data, operations-linked value drivers, and concurrent changes in multiple value-drivers (Bielinski, 3:Third full ¶).

15.   Bielinski shows the sensitivity of the baseline cash flow to changes in key factors. Showing how results might have turned out differently if operating or strategic changes been effected in the recent past suggests improvements that can be made in the future (Bielinski, 3:Sixth full ¶).

16.   Sensitivity analysis can show how changes in key cost and operating components can impact cash flow. One striking conclusion is that the areas where the big dollars are do not always offer the greatest opportunities to improve cash flow and value (Bielinski, 3:Seventh and eighth full ¶).

17.   Bielinski describes how SVA can tie strategic changes directly to manufacturing by future initiatives to control costs, eliminating overspecification and establishing better value chain management (Bielinski, 3:Bottom ¶).

18.   And if both the acquirer and target utilize VBM in constructing a projection, the two sides might come close to reaching a consensus on what constitutes a "realistic" projection of future performance (Bielinski, 4:Bottom ¶).

19. With VBM, sensitivity analysis of past results offers clues to what can be done in the future and which value drives - e.g., sales growth, profit margins, productivity, etc. - should receive the most attention to achieve the optimal rewards. Additionally, the VBM technique allows the analyst to figure key decision making trade-offs, since attention to one driver may generate negative effects on others or two or more drivers may have to be varied in concert to produce the best results (Bielinski, 5:Keys to creating value).

Brown

20. Brown is an accounting journal article describing how artificial intelligence (AI) is implemented in business practices. Three of the most common methods parallel the way people reason: rules (inference procedures), cases (case-based reasoning), and pattern matching (neural networks). These methods may be used separately or in combination and currently are being used to solve a variety of business tasks (Brown 51:Left col., Bottom ¶ - Center col.).

21. Neural networks use pattern matching. The financial services industry with its large databases has fielded several successful neural network applications, and neural networks based on information about customers or potential customers have proved effective. If large databases exist with which to train a neural network, then use of that technology should be considered. For a neural network the large database can be used as the equivalent of the human expert (Brown 52:Center col., Second ¶).

22. Neural networks are used for forecasting future sales and prices, estimating future costs, and planning future schedules and expenditures (Brown 53:Left col., Forecasting and Scheduling).

23. An air carrier's improved scheduling makes aircraft operations more predictable, reduces delays, and reduces fuel costs by shortening the time aircraft spend waiting for available gates. More efficient scheduling raises the number of flights by each aircraft, increases revenue, provides better management of disruptions, and improves passenger service (Brown 53:Left col.-middle col., Forecasting and Scheduling).

24. A provider of hospital supplies, uses a neural network to identify the key characteristics of the best customers and searches the inactive customer list for the highest probability purchasers from those who are inactive. Neural networks also help with customer service and support (Brown 53:Center col., First full ¶).

25. As businesses reorganize based on customer needs, neural networks can help them analyze past business transactions so they can understand their customers' buying patterns. One neural network for database mining has been tailored for database marketing (Brown 53:Center col., Second full ¶).

26. Many systems also have been developed to help investors and investment companies manage investments in securities. One company has a neural network it uses as a decision aid in stock purchases for mutual funds. The neural network makes a very accurate forecast about 10% of the time; the other 90% of the time it makes no forecast at all. Another company uses a neural network to manage the $100 million

1 equity portfolio of its pension fund. Forty indicators are used to rank the

2 expected future returns of 1,000 equities. Currently owned stocks are

3 sold and are replaced by those with future return rating over a certain

4 cutoff, which results in an 80% monthly turnover. The portfolio return,

5 net of transaction costs, exceeds that of the Standard & Poor's 500 index.

6 Other firms use neural network to predict the S & P 500 index and the

7 performance of stocks and bonds to help market traders in making their

8 buy, hold, and sell decisions. The system recognizes patterns in market

9 activity before they are apparent to a human, which may mean millions

10 in trading profits (Brown 56:Center col., Investments).

11 *Rappaport*

12 27. Rappaport describes techniques for creating shareholder value

13   (Rappaport Title).

14 28. A component of the cost of equity is a risk premium. One way of

15   estimating the risk premium for a particular stock is by computing the

16   product of the market risk premium for equity (the excess of the

17   expected rate of return on a representative market index such as the

18   Standard & Poor's 500 stock index over the risk-free rate) and the

19   individual security's systematic risk, as measured by its beta coefficient

20   (Rappaport 39:Middle full ¶).

21 29. Rappaport teaches that three factors determine stock prices: cash

22   flows, a long-term forecast of these cash flows, and the cost of capital or

23   discount rate that reflects the relative risk of a company's cash flows.

24   The present value of a company's future cash flows, not its quarterly

25   earnings, determines its stock price (Rappaport 70:Last full ¶).

1   30.   Rappaport teaches that business value depends on seven financial

2   value drivers: sales growth, operating profit margin, incremental fixed

3   capital investment, incremental working capital investment, cash tax

4   rate, cost of capital, and value growth duration. While these drivers are

5   critical in determining the value of any business, they are too broad to be

6   useful for many operating decisions. To be useful, operating managers

7   must establish for each business the micro value drivers that influence

8   the seven financial or macro value drivers.

9   31.   Rappaport teaches that an assessment of these micro value drivers at

10   the business unit level allows management to focus on those activities

11   that maximize value and to eliminate costly investment of resources in

12   activities that provide marginal or no potential for creating value. Value

13   driver analysis is a critical step in the search for strategic initiatives with

14   the highest value-creation leverage. Isolating these key micro value

15   drivers enables management to target business unit operations that have

16   the most significant value impact and those most easily controlled by

17   management.

18   32.   Rappaport teaches that the first step of a value driver analysis is to

19   develop a value driver "map" of the business. This involves identifying

20   the micro value drivers that impact sales growth, operating profit

21   margins, and investment requirements. Armed with a better

22   understanding of micro value driver relationships, the next step is to

23   identify the drivers that have the greatest impact on value.

24   33.   Rappaport provides an illustrative table (Rappaport 172:Figure 9-3.

25   Micro and Macro Value Drivers) that presents the sensitivity of

1   shareholder value to changes in selected drivers for retail as well as

2   industrial marketing (Rappaport 172:Top ¶).

3   34.   Rappaport teaches that most managers believe they can identify the

4   key drivers for their business. However, these drivers may in many cases

5   be appropriate for a short-term-earnings-driven business rather than an

6   organization searching for long-term value, Experience shows that value

7   driver sensitivities are not always obvious. Therefore, quantifying

8   sensitivities is a valuable exercise for both operating and senior

9   management (Rappaport 172:First full ¶).

PRINCIPLES OF LAW

11   *Claim Construction*

12   During examination of a patent application, pending claims are given

13   their broadest reasonable construction consistent with the specification. *In*

14   *re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550 (CCPA 1969); *In*

15   *re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, (Fed. Cir. 2004).

16   Although a patent applicant is entitled to be his or her own lexicographer of

17   patent claim terms, in *ex parte* prosecution it must be within limits. *In re Corr*,

18   347 F.2d 578, 580, 146 USPQ 69, 70 (CCPA 1965). The applicant must do so by

19   placing such definitions in the Specification with sufficient clarity to provide a

20   person of ordinary skill in the art with clear and precise notice of the meaning that

21   is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480, 31 USPQ2d 1671,

22   1674 (Fed. Cir. 1994) (although an inventor is free to define the specific terms

23   used to describe the invention, this must be done with reasonable clarity,

24   deliberateness, and precision; where an inventor chooses to give terms uncommon

25   meanings, the inventor must set out any uncommon definition in some manner

1 within the patent disclosure so as to give one of ordinary skill in the art notice of

2 the change).

3 *Obviousness*

4   A claimed invention is unpatentable if the differences between it and the

5 prior art are "such that the subject matter as a whole would have been obvious at

6 the time the invention was made to a person having ordinary skill in the art." 35

7 U.S.C. § 103(a) (2000); *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82

8 USPQ2d 1385, 1391 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 148

9 USPQ 459, 466 (1966).

10   In *Graham*, the Court held that that the obviousness analysis is bottomed on

11 several basic factual inquiries: "[(1)] the scope and content of the prior art are to be

12 determined; [(2)] differences between the prior art and the claims at issue are to be

13 ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383

14 U.S. at 17, 148 USPQ at 467. *See also KSR Int'l v. Teleflex Inc.*, 127 S.Ct. at

15 1734, 82 USPQ2d at 1391. "The combination of familiar elements according to

16 known methods is likely to be obvious when it does no more than yield predictable

17 results." *Id.* 127 S.Ct. at 1739, 82 USPQ2d at 1395.

18   "When a work is available in one field of endeavor, design incentives and

19 other market forces can prompt variations of it, either in the same field or in a

20 different one. If a person of ordinary skill in the art can implement a predictable

21 variation, § 103 likely bars its patentability." *Id.* 127 S. Ct. at 1740, USPQ2d at

22 1396.

23   "For the same reason, if a technique has been used to improve one device,

24 and a person of ordinary skill in the art would recognize that it would improve

1   similar devices in the same way, using the technique is obvious unless its actual

2   application is beyond his or her skill." *Id.*

3   "Under the correct analysis, any need or problem known in the field of

4   endeavor at the time of invention and addressed by the patent can provide a reason

5   for combining the elements in the manner claimed." 127 S. Ct. at 1742, USPQ2d at

6   1397.

7   ANALYSIS

8   *Claims 69-103 rejected under 35 U.S.C. § 103(a) as unpatentable over Bielinski*

9   *and Brown.*

10   The Appellant argues these claims as a group. Although the Appellant

11 nominally contends each of the independent claims individually, each of the

12 contentions for the remaining independent claims refers back to the arguments for

13 claim 69.

14   Accordingly, we select claim 69 as representative of the group.

15 37 C.F.R. § 41.37(c(1)(vii) (2006).

16   We initially construe claim 69. We find that claim 69 is divided into two parts,

17 [1] and [2]. Part [1] recites the method steps, which, overall perform element [1.a]

18 integrating data, by step [1.b] using a neural network model to identify a fist set of

19 candidates, from which step [1.c] further identifies a set of drivers, and defines a

20 set of contribution summaries, finally, in step [1.d] creating network models with

21 the summaries. Thus, claim 69 contains three steps, [1.b-d] that are employed

22 within step [1.a]. Steps [1.b-d] are necessarily sequential because each of [1.c] and

23 [1.d] requires output from the preceding step. Part [2] identifies components used

1   in the steps in part [1], and thus limits the terms those components are used in

2   within part [1].

3   The Examiner found that Bielinski describes all of the elements of claim 69

4   except for the use of neural network models using the indicators and a portion of

5   the data to identify value driver candidates. To overcome this deficiency, the

6   Examiner found that Brown described valuation using neural networks and training

7   neural network models for aspects of financial performance using indicators. The

8   Examiner concluded that it would have been obvious to a person of ordinary skill

9   in the art to have combined Bielinski and Brown to take advantage of neural

10 networks to increase accuracy of models (Answer 3:Bottom ¶ - 4:Full page).

11   The Appellant contends that Bielinski[1] and Brown: (1) teach away from the

12 proposed combination; (2) would require a change in operating principle; (3) if

13 combined, would destroy the ability of one of the methods to function; (4) fails to

14 make the invention as a whole obvious; and (5) fails to meet any of the criteria for

15 establishing a prima facie case of obviousness (Br. 12:Third ¶).

16   *Teaching Away*

17   (1) The Appellant argues that Rappaport's description of only three market

18 value determinants, is incompatible with Brown's forty determinants (Br.

19 12:Bottom ¶).

---

[1] The Appellant relies on Rappaport to support many of its arguments regarding Bielinski, apparently treating Rappaport as having been incorporated by reference within Bielinski, based on Bielinski's described usage of Rappaport's Shareholder Value Analysis (Bielinski, 30:First full ¶). The Brief somewhat confusingly attributes text actually found in Rappaport to Bielinski. In this opinion, when we refer to Rappaport's text, based on either the Appellant's contentions, or on our own analysis and fact finding, we attribute that text to Rappaport.

1   We initially find that here, as throughout the arguments in the Brief, the

2   Appellant has somewhat rhetorically attributed the teachings of Rappaport, and in

3   particular certain assertions within Rappaport, to Bielinski as a device to discredit

4   the combination of Bielinski and Brown. While Bielinski refers to the teachings of

5   Rappaport, as we noted in footnote [1], this does not necessarily mean that

6   everything taught and asserted by Rappaport is necessarily embraced by

7   Bielinski's teachings. In particular, Bielinski distinguishes its VBM technique

8   from Rappaport's SVA technique (FF 09).

9   As to the merits of the Appellant's argument, although Rappaport describes

10   that three factors determine stock prices (FF 29), we find that Bielinski describes

11   several market value drivers and implies there are more (FF 19). Also, we find that

12   Bielinski describes drivers of varying scope (FF 12), such that the broadest drivers

13   taught by Rappaport can be broken down into more drivers more directly linked to

14   operations.

15   On the other hand, the forty indicators taught by Brown that the Appellant

16   contends are incompatible relate to portfolio analysis across multiple companies

17   (FF 26) rather than analysis of a single company as taught by Bielinski (FF 04). It

18   is hardly surprising and totally irrelevant that an application comparing multiple

19   companies might use more indicators than a single company.

20   The Appellant has not sustained its burden of showing the Examiner erred.

21   (2) The Appellant argues that Bielinski's teachings imply an efficient market,

22   which is incompatible with an inefficient market implied by Rappaport (Br. 13:Top

23   ¶).

24   The Appellant bases this argument again on Rappaport rather than Bielinski as

25   such, pointing to Rappaport's description of a market risk quantifier, beta (FF 28).

1   The Appellant contrasts this with Brown's use of neural networks to select

2   individual stocks in a portfolio (FF 26). Thus, the Appellant has, as in the previous

3   argument, assigned an SVA teaching by Rappaport to Bielinski that is not

4   necessarily applicable to Bielinski's VBA, and compared Bielinski's single

5   company analysis to Brown's example of portfolio analysis. More to the point, we

6   find there is nothing fundamentally incompatible between a measure of market risk

7   and portfolio selection as suggested by the Appellant, particularly since it is widely

8   known that the purpose of portfolios is to manage risk. None of the three

9   references make any connection between their teachings and either an efficient or

10 inefficient market hypothesis.

11 The Appellant has not sustained its burden of showing the Examiner erred.

12 (3) The Appellant argues that Bielinski's reliance on long term cash flow

13 analysis is incompatible with Brown's short term analysis, and that Bielinski

14 specifically teaches away from the use of projections for any aspect of analysis

15 (Br. 13:Second ¶).

16 We again find that the Appellant compared Bielinski's single company analysis

17 to Brown's example of portfolio analysis, as the short term analysis pointed to by

18 the Appellant (Brown 56:reference to 80% monthly turnover) is again within the

19 investment analysis examples of Brown.

20 We further find that the Appellant is conflating the two distinct operations

21 performed by Bielinski's VBM. In particular, Bielinski first tests the sensitivity of

22 long term historical cash flow to different operating assumptions about past

23 operations (FF 10). Then Bielinski applies the results of this sensitivity analysis to

24 future strategic action (FF 11). Contrary to the Appellant's contention, Bielinski

25 specifically teaches the use of projections in this phase of the analysis.

1   Bielinski does not characterize the time frame for analysis of future action, but

2   we find that such projected time frames typically include relatively short term time

3   frames because of the inherent uncertainty in projections that increases with time

4   frame. We further find that there is nothing in Bielinski that would suggest that the

5   time frame for the projection phase of the analysis is incompatible with a shorter

6   time frame.

7   The Appellant has not sustained its burden of showing the Examiner erred.

8   (4) The Appellant argues that Rappaport's use of a tree based model topology

9   is incompatible with Brown's network topology (Br. 13:Third ¶).

10   The Appellant has made a broad contention of the incompatibility of these

11   methods without a specific showing of the nature of their incompatibility. The

12   Appellant bases this argument again on Rappaport rather than Bielinski as such,

13   contending that Rappaport implicitly teaches a tree methodology. We find that

14   nothing in Rappaport specifically refers to a tree based model topology. Rappaport

15   presents a figure of a tree diagram to represent the hierarchical nature of

16   organizational costs and activities (FF 33), but makes no representation as to how

17   this is incorporated within the model.

18   Even if Bielinski's VBM were to employ a tree based methodology, we find

19   nothing inconsistent with employing a neural network within each of the branches

20   of the tree's analysis. Further, we find nothing incompatible with assigning neural

21   network analysis to Bielinski's phase of finding driver candidates as in claim 69

22   element [1.b.] and assigning a tree based induction model to identify drivers as in

23   element [1.c.]. The Appellant has not made any contention otherwise.

24   The Appellant has not sustained its burden of showing the Examiner erred.

1   (5) The Appellant argues that Bielinski's usage of sensitivity analysis is

2   incompatible with Brown's neural network scoring for the same data (Br.

3   13:Bottom ¶).

4   We again find that the Appellant compared Bielinski's single company analysis

5   to Brown's example of portfolio analysis, as the scoring pointed to by the

6   Appellant (Brown 56:reference to ranking of future returns of stocks) is again

7   within the investment analysis examples of Brown.

8   Further, Bielinski applies the results of its sensitivity analysis to future strategic

9   action (FF 11). Similarly, Brown applies its results to future strategic actions (FF

10   22). We find nothing incompatible between using the results of sensitivity

11   analysis, their implications for future actions, and the results of neural networks for

12   suggesting future actions.

13   The Appellant goes on to argue that Bielinski and Brown are measuring the

14   same thing and there would be no point in using two methodologies to measure the

15   same thing (Br. 13:Bottom ¶). We find this is not an argument of incompatibility,

16   but of so much compatibility as to be redundant. We further find that Bielinski and

17   Brown base their analysis on different inputs (Bielinski using cash flows and

18   Brown using large databases) and the use of different analytical methods to

19   converge on a common result to reduce uncertainty is widely known and applied.

20   The Appellant has not sustained its burden of showing the Examiner erred.

21   *Changing Principle of Operation*

22   The Appellant argues that Bielinski and Rappaport's Shareholder Value

23   Analysis (SVA) would change Brown's neural network because it would use a tree

24   based analysis, acknowledge that the efficient market theory does not explain all

1   value changes, and acknowledge that cash flow explains only a portion of the value

2   of an enterprise (Br. 14:Top ¶). The Appellant further argue that Bielinski's Value

3   Based Management (VBM) would change Brown's strict reliance on historical

4   cash flow and the related prohibition against using projections of any kind (Br.

5   14:Second ¶).

6   We find that these contentions are all repetitions of those made under the rubric

7   of teaching away, *supra*, but couched as changing principles of operation, and our

8   findings are the same. The Appellant has made no contention specifically

9   demonstrating that the combination of Bielinske and Brown would necessarily

10 change the principles of their operation, particularly since Brown's neural network

11 might be used in performance of element [1.b.] and Bielinski's VBM in

12 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

13   The Appellant has not sustained its burden of showing the Examiner erred.

14 *Destruction of Ability to Function*

15   The Appellant argues that VBM requires that inputs to each node in a tree

16 arithmetically combine to produce an input to a higher level in the tree. The

17 Appellant contends that use of a neural network would destroy the ability to

18 arithmetically generate the numbers required at each tree node. The Appellant

19 similarly contends that the use of a tree would destroy the neural network's ability

20 to function (Br. 14:Bottom ¶ - 15:Top ¶).

21   We find that these contentions are all repetitions of those made under the rubric

22 of teaching away, *supra*, but couched as destroying the ability to function, and our

23 findings are the same. The Appellant has made no contention specifically

24 demonstrating that the combination of Bielinske and Brown would necessarily

25 destroy the abilities of their operation, particularly since Brown's neural network

1 might be used in performance of element [1.b.] and Bielinski's VBM in

2 performance of [1.c.] of claim 69, thus not requiring any overlap of their operation.

3   The Appellant has not sustained its burden of showing the Examiner erred.

4   *Failure to Make Invention as a Whole Obvious*

5   The Appellant repeats the arguments regarding teaching away and concludes

6 that the invention is therefore not obvious as a whole (Br. 15:First full ¶).

7   We find that these contentions are all repetitions of those made under the rubric

8 of teaching away, *supra*, but couched as making the invention as a whole obvious,

9 and our findings are the same.

10   The Appellant has not sustained its burden of showing the Examiner erred.

11   *Failure to Make Prima Facie Case for Obviousness*

12   The Appellant argues (1) there is no evidence for the motivation to combine

13 the references; (2) there is no reasonable expectation of success for the same

14 reasons the combination would destroy their ability to function; and (3) the

15 combination fails to include optimization techniques (Br. 15:Bottom ¶ - 16:Top

16 three ¶'s).

17   We find that both Bielinski and Brown describe analytical techniques

18 employed to find drivers for improving organizational performance. Brown

19 teaches that neural networks may be used to analyze past business transactions so

20 they can understand customers' buying patterns, whereas Bielinski teaches how

21 VBM sensitivity analysis of past results offers clues to what can be done in the

22 future and which value drivers should receive the most attention to achieve optimal

23 rewards. Thus both are directed towards analysis of past business operations to

24 offer clues to changing future operations to improve business performance. It

1   would have been obvious to a person of ordinary skill in the art to have adapted

2   techniques from each of Brown and Bielinski to provide the advantages of each

3   technique in improving overall performance.

4   The Appellant has not sustained its burden of showing the Examiner erred.

5   *Reply Brief*

6   We find that the Appellant has made general allegations that the combination

7   of Bielinski and Brown fails to teach or suggest any of the claim limitations of

8   claims 77-103 for the first time in the Reply Brief. A statement which merely

9   points out what a claim recites will not be considered an argument for separate

10   patentability of the claim. 37 C.F.R. 41.37(c)(1)(vii). A general allegation that the

11   art does not teach any of the claim limitations is no more than merely pointing out

12   the claim limitations. Thus, these claims fall along with claim 69.

13   The Appellant has not sustained its burden of showing that the Examiner erred

14   in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over Bielinski

15   and Brown.

16   CONCLUSIONS OF LAW

17   The Appellant has not sustained its burden of showing that the Examiner erred

18   in rejecting claims 69-103 under 35 U.S.C. § 103(a) as unpatentable over the prior

19   art.

20   On this record, the Appellant is not entitled to a patent containing claims

21   69-103.

1   DECISION

2   To summarize, our decision is as follows:

3   • The rejection of claims 69-103 under 35 U.S.C. § 103(a) as unpatentable

4   over Bielinski and Brown is sustained.

5   No time period for taking any subsequent action in connection with this appeal

6   may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

7

8   <u>AFFIRMED</u>

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12   vsh

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